# A Regional Weapon of Choice: Forum Choice in International Trade Disputes

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**A Regional Weapon of Choice: Forum Choice in International Trade Disputes**

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What explains a state's choice to utilize a regional dispute settlement mechanism to resolve a trade dispute with another state instead of the global, multilateral forum of the World Trade Organization (WTO)? I argue that experience in regional dispute settlement mechanisms (DSMs) provides the opportunity for learning about the phases and specifics of the regional dispute resolution process. By learning through previous regional dispute experience, a state is able to generate a more accurate assessment of the expected outcome, costs, and value of bringing a current dispute to a regional forum and, thus, which forum is more preferred. However, I hypothesize that the extent of learning varies. I expect that the effect of previous regional dispute experience on future decisions to utilize a regional forum, given that a multilateral alternative exists at the WTO, is conditioned by a state's learning capacity. This conditional effect is due to variation in the ability and incentive of a state to learn. Each is measured by a state's available resources, i.e., its level of development and the economic relationship of the disputing dyad. I posit that the learning that occurs makes these DSMs stumbling blocks toward multilateral trade dispute resolution. I test my expectations using newly-collected original data on the initiation of and rulings issued by the dispute settlement bodies associated with the Andean Community (CAN), Central American Common Market (CACM), Common Market of the South (CACM), North American Free Trade Agreement (NAFTA), and the World Trade Organization (WTO) between 1995 and 2010. I find that previous regional dispute experience increases the likelihood of initiating a current regional dispute in a particular subject area, relative to initiating a WTO dispute. In line with my expectations, I also find that the effects of previous experience vary. The effects of previous experience are conditioned by a state's learning capacity and the amount of previous experience. These results are robust to different conceptualizations of previous experiences and model specifications. The findings of this project demonstrate that the regional dispute settlement mechanisms act as a stumbling block toward multilateral trade dispute resolution.

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## 1.0 INTRODUCTION: WHY GO REGIONAL?

As states develop overlapping and nested institutions in the international trading system they accomplish a number of intended and unanticipated outcomes. These unintended outcomes include, among other things, the existence of structural elements that disadvantage certain states and the creation of the opportunity for a state to select between alternatives to resolve international trade disputes. For the former, what can be done to help address and correct the weaknesses of these institutions thereby remedying the inequities in the system? At the World Trade Organization (WTO), developing countries face a unique set of challenges emerging from diminished representation and resources to utilize the body relative to its developed counterparts. In 2002, for example, the Costa Rican mission to the WTO included only four staff members compared to the US's mission, which had sixteen mission representatives, three of which were dedicated legal advisors.[1] Costa Rica, which established its mission to the GATT/WTO in 1992, noted that doing so was difficult due to the financial burden, among other things.[2] These disparities continue to exist; in 2012 the US dedicated GATT/WTO mission had twenty-four members compared to Mexico's thirteen and Ecuador's seven representatives at their respective dedicated GATT/WTO missions.[3] The disadvantages in legal capacity has been partially addressed through the inclusion of the WTO Advisory Centre, which has the stated goals of advising developing country and least-developed country member states on all issues related to WTO law. However, the ability of this mechanism to wholly overcome capacity and litigation constraints is limited, specifically at trade dispute resolution forums distinct from the WTO. This raises the puzzle of what other pathways can be utilized to mitigate the extent of the disadvantages faced by developing countries.

One potential pathway to remedy or mitigate the inequities inherent in the WTO dispute settlement body is through substitutable forums. The ability to select between resolution alternatives is another unintended consequence of overlapping institutions. Given the availability of such options, what

[1] This is based on the 2002 WTO Telephone directory. I thank Chad Bown for providing me with this document.
[2] VanGrasstek (2013), 89
[3] VanGrasstek (2013), 90

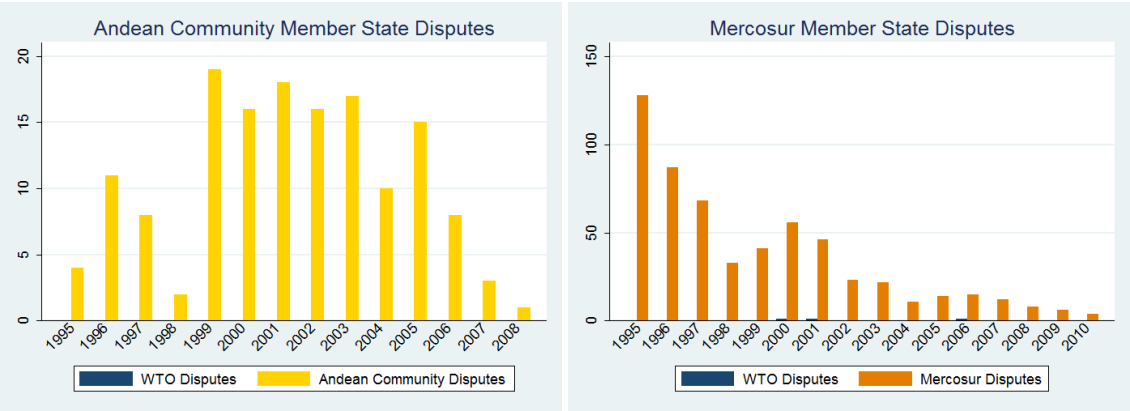
is the effect of regional dispute settlement on a state's choice to resolve an interstate dispute when a multilateral alternative exists? The existence of a choice between regional and multilateral bodies is exemplified when examining the influence of the overlap in the international trade dispute settlement bodies available to the United States and Canada during a long running dispute between these two states over softwood lumber imports from Canada. This dispute, which endured for over twenty years, arose over claims that the Canadian industry was unfairly subsidized by the Canadian government. This claim is derived from the differences in the pricing policies for lumber harvesting set by the US and Canada. While the US lumber industry is privatized, most of Canadian lumber harvested comes from lands owned by federal or provincial governments. This leads to pricing via competitive auction for the US lumber industry and stumpage fees set by the government for Canada. The Canadian procedure leads to generally lower prices than those set by competitive auctions, which the US considered to be a form of subsidization.

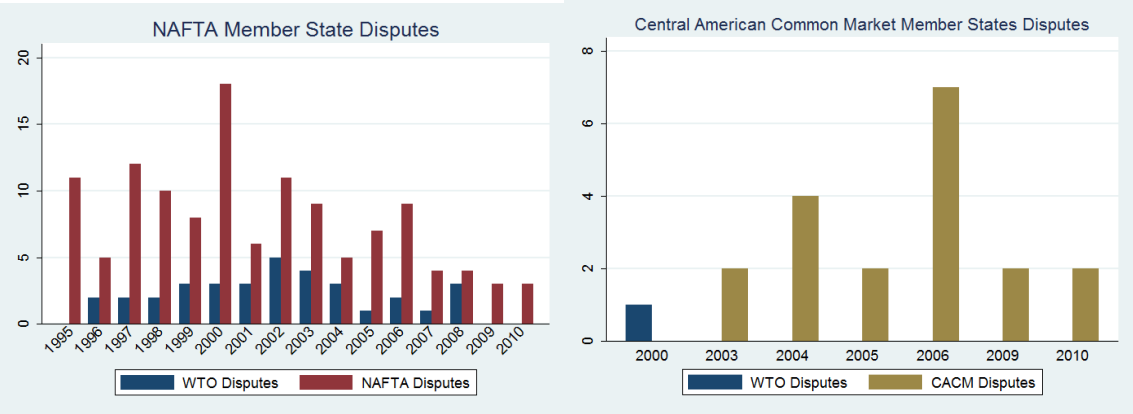
During the course of this dispute, a viable regional alternative existed at the North American Free Trade Agreement (NAFTA)[4] and a viable multilateral alternative existed at the World Trade Organization (WTO) and its predecessor the General Agreement on Tariffs and Trade (GATT). Further, the states used these alternatives to try to reach resolution in this dispute; this dispute has been extensively litigated at the dispute settlement bodies of both the NAFTA and WTO.[5] The overlapping jurisdictions of these two bodies– and the fact that Canada has initiated this dispute at both dispute resolution mechanisms – has presented divergent opinions on how this dispute should be resolved. For example, in 2005 both the NAFTA and WTO bodies issued contradictory rulings on this dispute.[6] At the regional level, the NAFTA Extraordinary Challenge Committee (ECC) affirmed the validity of the NAFTA panel decision issued in 2004 stating that there was no material injury to US firms that justified the duties put in place by the US as a response – i.e., the NAFTA panel ruled in favor of Canada.

[4] This includes the binational panel established under the NAFTA's predecessor, the Canada-US Free Trade Agreement.
[5] This dispute is at the heart of the following: WT/DS 277, USA-CDA-1992-1904-01, USA-CDA-1992-1904-02, USA-CDA-1994-1904-01ECC, USA-CDA-2002-1904-02, USA-CDA-2002-1904-03, USA-CDA-2002-1904-07, USA-CDA-2004-1904-01ECC, USA-CDA-2005-1904-01, USA-CDA-2005-1904-02, USA-CDA-2005-1904-03, USA-CDA-2005-1904-04, USA-CDA-2006-1904-01, USA-CDA-2006-1904-02, USA-CDA-2006-1904-05.
[6] See the following disputes: WT/DS 277, USA-CDA-2004-1904-01ECC. See also Pauwelyn (2005).

The WTO panel, in contrast, found in favor of the United States. This panel found that Canadian softwood lumber imports posed a potential threat to US domestic competing firms. Following these rulings, Canada initiated three additional softwood lumber disputes at the NAFTA body in 2006 and four additional decisions were issued by NAFTA panels on the United States' policies in regards to this dispute between 2006 and 2009. At the WTO, in contrast, no new softwood lumber disputes have been initiated by Canada against the United States. Why did Canada select to use both the WTO and NAFTA to reach a resolution? What caused Canada to move away from the multilateral alternative and choose to pursue this dispute at the NAFTA following the decision issued by the WTO in 2005? Was the decision to utilize the NAFTA in the future a function of what Canada learned from each of these decisions, since one decision upheld its arguments while the other found against it? Overall, has the NAFTA acted as a stumbling block towards multilateral resolution at the WTO in this dispute? The progression of this dispute represents the potential role that the presence of and experience in regional dispute settlement bodies can have on future dispute initiation decisions.

**Figure 1.1: Regional and WTO Dispute Initiation, by Regional Trade Organization**






It is not only developed countries, such as Canada and the United States, that utilize the regional dispute settlement bodies of international trade organizations at a greater rate than the dispute resolution body of the WTO. Figure 1 shows the initiation of disputes by the member states of regional organizations against other member states at the regional and WTO dispute settlement bodies over time. For each of the four distinct regional trade agreements – the NAFTA, the Andean Community (CAN), the Central American Common Market (CACM), and the Common Market of the South (Mercosur) – regional trade dispute settlement bodies are not just used by states but they are used by states at a greater rate than the dispute settlement body of the WTO. Despite the large variations in the member states of these organizations – particularly in their levels of development, which influences the resource and capacity constraints faced by a state and, as a result, the potential difficulties encountered when utilizing these bodies – the same general trend toward regional dispute resolution exists. Between 1995, when the WTO came into existence, and 2010, the member states of the NAFTA, CACM, Mercosur, and Andean Community initiated 34, 1, 3, and 0 disputes at the dispute settlement body of the WTO against another member state in their respective regional trade agreements. In contrast, the NAFTA, CACM, Mercosur, and Andean Community member states initiated 134, 19, 575, 227 disputes regionally, respectively.[7]

Why do we observe these trends in dispute initiation? Why have these states utilized regional international forums instead of the global, multilateral alternative? Further, does utilization of these

[7] These counts include disputes before the executive and judicial bodies associated with regional dispute settlement. The count of disputes at the Andean Community includes only disputes initiated by member states; it does not include disputes initiated by the Board of Cartagena Agreement or Secretary General.

regional bodies help states to overcome and/or mitigate some disadvantages faced in the resolution of international trade disputes? The creation and perpetuation of a system of nested and overlapping organizations that fulfill many of the same purposes provides states with a choice on what forum they could use to address issues associated with free trade. While they may have similar objectives, these organizations vary in terms of relative costs, disadvantages faced by member states, and likelihood of attaining the most preferred outcome. Given the presence of viable alternatives that provide states with a certain set of costs and benefits, states are able to forum shop in international trade disputes.[8] The behavior of Canada in the softwood lumber dispute between Canada and the US described above is an example of forum shopping. The intrigue of choices in forum shopping is heightened when considering the differences across regional bodies and member states within these regional agreements.

In terms of trade relations between states, the idea of forum shopping has been addressed with respect to choosing the level, timing, and type of trade restrictions put in place against a particular country. Inherent in much of this discussion is a realistic assessment of the divergent benefits derived by states as a result of their respective economic characteristics and relationships with other member states. The scholarly focus on forum shopping at international trade organizations has thus been focused on the overlapping regional bodies as either stumbling or building blocks toward multilateral trade liberalization. While this allows for an assessment of the stumbling and/or building block roles of regional trade agreements in terms of the economic and/or trade liberalization impact, this existing research does not adequately assess the role and impact of forum shopping in the dispute settlement component of these international trade agreements and how this legalized component of the institution can behave as a stumbling or building block toward multilateral dispute resolution, particularly by allowing states to overcome existing structural disadvantages that inhibit utilization of multilateral dispute resolution at the WTO.

[8] Forum shopping is defined as the choice between two nested and/or overlapping institutions, such as the World Trade Organization (WTO) and the North American Free Trade Agreement (NAFTA), to resolve a dispute. It occurs when a state makes a choice between two institutions that have the same or similar coverage of issues and jurisdictions.

It further fails to assess how the disparities in economic resources, which have been documented to shape behavior within these bodies, also influences these forum shopping choices and, as a result, the extent of the stumbling or building block effect. In so doing, extant insight into these issues provide insufficient explanations for not only why states select regional dispute settlement bodies but also whether or not these bodies behave as stumbling or building blocks towards multilateral dispute resolution at the World Trade Organization (WTO) Dispute Settlement Body (DSB) and if regional bodies can aid in mitigating disadvantages faced by developing countries in international trade dispute resolution. Given the anecdotal evidence presented above, this is a glaring gap in the existing research on international trade disputes, regional dispute settlement bodies, and the role of economic power disparities in trade dispute resolution, in particular. This project aims to fill that gap.

## 1.1 Learning From Previous Experience and Future Forum Choice

This project takes a multifaceted approach to understand a state's forum shopping behavior in international trade disputes. To do so, it specifically seeks to answer three related questions. First, do regional trade dispute settlement bodies behave as stumbling or building blocks toward dispute resolution at the multilateral alternative available at the WTO? Second, does previous experience at a regional dispute settlement body influence the likelihood of utilizing a regional or multilateral forum to resolve a trade dispute in the future? Third, to what extent do economic disparities influence and condition these forum shopping decisions? To answer these questions, I focus on the choice between dispute settlement bodies of trade organizations developed by and composed of a specific group of states. These groupings can be based on geographic location and limited based on regional barriers – as is the case with the NAFTA, for example – or be globally inclusive and based on a different set of membership criteria, which is the case at the WTO. Although they may vary in terms of rules of scope, procedure, standing, precedential value, and, compliance mechanisms, among other things, the dispute settlement bodies of regional trade organizations and the WTO share a number of characteristics. Primarily, each of these

institutions is established to help support the trade organization and enforce the rules associated with trade liberalization at the regional or multilateral level.

Herein, I examine how states can enhance their own capacities and overcome existing capacity constraints that limit choices in international trade dispute resolution and forum shopping. Specifically, I argue that regional trade dispute settlement bodies behave as stumbling blocks toward multilateral dispute resolution but that the extent of this effect varies based on existing limitations and incentives. The argument that I present posits that experience in these regional dispute settlement bodies not only influences the likelihood of future regional dispute initiation but that that likelihood increases *relative* to the likelihood that the WTO dispute settlement body is utilized. Building off literature on the role of regional organizations relative to multilateral ones, state learning through institutions, disadvantages faced by developing countries at international bodies, and international dispute settlement, I expect that a regional forum will be selected when a state perceives that the greatest amount of benefits will be received and costs will be minimized through use of a regional dispute settlement body instead of the alternative available at the WTO. Thus, the stumbling block role of regional trade dispute settlement bodies is inherently tied to the ability of these bodies to minimize costs and maximize benefits to a state.

I argue that states, particularly those with diminished legal and economic resources, are able to minimize costs and maximize benefits at a regional body to make it the preferable forum choice alternative by learning through previous experience. In my argument, I identify a "learning-by-doing" mechanism to explain the stumbling block role of regional trade dispute settlement bodies. I contend that a state learns from previous dispute resolution experiences at a regional body. This influences its future forum shopping decision, which is composed of the costs and benefits of using that regional body in the future relative to those associated with use of the WTO dispute settlement body. Through previous use, a state can learn about the costs associated with identification, initiation, and litigation of a trade dispute at the regional forum, the procedure for resolving disputes, and the specifics and interpretations of trade laws at that forum. Each piece of knowledge allows a state to develop or update its dispute resolution infrastructure to minimize potential costs of regional dispute resolution in the future. Further, gathering

this information allows a state to develop more accurate expectations. Previous use allows a state to compare its *ex post* and *ex ante* beliefs to uncover the likelihoods associated with particular costs, benefits, and outcomes. An increase in confidence in the beliefs on attaining the most preferred outcome, combined with the decrease in the costs associated with identification, initiation, and litigation in a potential trade dispute, increases the desirability of using the regional dispute settlement alternative in future trade disputes.

However, the argument put forward in this project posits that states do not learn from their previous regional dispute experiences at the same rate. The ability of a state to learn from its previous regional dispute experience is conditioned by its learning capacity , i.e., its potential to learn. I expect that the extent of a state's learning capacity is determined by the divergence between its *ex post* and *ex ante* beliefs. The space between these beliefs is where there is the potential for learning to occur. Given my argument's focus on the disadvantages faced by certain groups of states and forum shopping in international trade dispute settlement bodies, learning capacity is conceptualized to be a function of a state's level of development and its dyadic economic relationship with the other party in the prior dispute.

I expect that the level of development will contribute to learning capacity based on the idea that there is a correlation between amount of available resources and accuracy of expectations regarding costs, benefits, and outcomes associated with using a regional dispute settlement body to resolve an international trade dispute. This is also supported by the extensive literature on the role of capacity constraints in dispute initiation behavior in international trade dispute settlement bodies. The level of development thus captures the "ability" component of learning capacity. I expect that as the ability component of learning increases, i.e., development level increases, the divergence between *ex post* and *ex ante* beliefs decreases, which decreases the potential for learning. This generates the expectation that previous regional dispute experience will have a greater effect on future regional dispute forum choice at lower levels of development.

While "ability" is important for state learning from previous regional dispute experience, it is not sufficient for understanding learning capacity. To fully understand this concept and how it conditions the

effect of previous regional dispute experience on future forum choice, it is essential to also consider a state's "incentive" to learn. As the incentive to learn increases, a state will be more willing to spend the time and resources culling information from previous experiences and understanding how that knowledge is applicable in future trade disputes. It is thus the value ascribed by a state to minimizing the divergence between expected costs and outcomes and the observed costs, benefits and outcomes. I expect that the dyadic economic relationship between the disputing parties will influence the incentive to learn. Similar to above, I expect that as the value of minimizing the gap between expectations and outcomes increases, so will the effect of previous regional dispute experience on future forum choice.

To understand the basis for my argument regarding how states can overcome existing limitations, engage in "learning-by-doing" to minimize these limitations, and how learning varies across states and dyads in these regional trade dispute settlement bodies, it is essential to first consider the existing literature. This existing literature helps build the foundation for the argument that I will be presenting, and supporting, in this project. I look specifically to three strains of literature. The first is on the role of regional organizations as contributing to or hindering future multilateral endeavors. Second, I look to existing literature on state learning as well as on learning within and from international organizations. A major source of research that provides insight into this project is the research on dispute resolution behavior. In this section, I delve into existing theories explaining use of regional and multilateral dispute settlement bodies, forum shopping by states and other actors, and disadvantages faced by developing countries in these international legal bodies.

### 1.1.1 Regional Organizations as Stumbling or Building Blocks

The classification of the dispute settlement body of a regional organization as a stumbling or building block is based on how the body, and the information gathered at it, is utilized in the future. Using the information from regional experiences to pursue multilateral objectives in the future would lead regional dispute settlement bodies to play a building block role. This is exemplified by Brazil's behavior in a 2001 poultry dispute with Argentina. In this dispute, Brazil utilized the information acquired during

an attempt to resolve the dispute regionally in its initiation of a dispute at the WTO to resolve the dispute.[9] In contrast, these bodies would act as stumbling blocks if regional use begets regional use, as was the case in the softwood lumber dispute between Canada and the United States described at the start of this chapter. This dispute also demonstrates the potential stumbling block role given the divergence in decisions issued by each of the bodies and the resultant behavior from Canada in dispute initiation; the United States received repeatedly favorable rulings from the WTO and, following these rulings, Canada moved toward regional resolution efforts. The presence of a regional body, and the rulings issued by it, thus complicated multilateral resolution endeavors.

A DSM may also be a stumbling block when, for example, disputes are initiated simultaneously and policies are altered based on the most preferred ruling or if the same information and experiences are translated to provide domestic groups with the necessary expertise to coordinate and raise objections to multilateral endeavors.[10] The former stumbling block form was seen with the DSM of the NAFTA in the high fructose corn syrup dispute between Mexico and the United States. The United States initiated disputes at both the NAFTA and WTO dispute settlement mechanisms (DSMs) in 1998 and both forums issued rulings on the dispute. While Mexico eventually removed the offending measure, there was no reference to the WTO in its implementation.[11] The stumbling or building block label is acquired by analyzing what a state learns-by-doing at a regional body and how experiences and information gathered at the regional body are used in the future.

Much existing scholarly attention has focused on the stumbling/building block effect of regional trade agreements in terms of the economic effects. Specifically, this research focuses on the role that regional organizations play toward achieving multilateral trade liberalization. In existing research this characterization as a stumbling or building block can be determined by, among other things: the effect on trade, the effect on trade liberalization negotiations, and the effect of domestic interest groups. The

[9] Brazil received an unfavorable ruling in the dispute initiated at the Mercosur. The Mercosur arbitral tribunal found that the measure was not inconsistent with Argentina's obligations as a Mercosur member state. Following the issuance of this decision, Brazil initiated a dispute at the WTO and prevailed. The WTO ruled that the Argentine measure violated the WTO Agreement on Antidumping (Barral 2007; Pierola and Horlick 2007; Porges 2011).
[10] Mattoo and Fink (2002), among others, address the effect of domestic groups in hindering multilateral trade liberalization.
[11] Huerta Goldman (2010)

research on the effect on trade focuses on the economic effect of these regional trade agreements. Specifically, this literature examines whether member states of regional organizations liberalize multilateral trade more quickly, which would thereby allow a state to reap the benefits theorized to be associated with open trade. Arguments have been made that these regional bodies are stumbling blocks based on the role that they play in diverting trade and by providing different rules of origin that states can exploit to their advantage.[12]

The economic effects may also be generated simply through the existence of a regional body given the externalities associated with liberalization. Liberalization at the regional level allows states to cultivate and/or maintain certain preferential relationships that may not be subject to the most-favored nation component of the General Agreement on Tariffs and Trade (GATT) and its successor, the WTO.[13] The existence of these regional preferential relationships may put pressure on a state to not pursue multilateral liberalization efforts. By lowering tariffs and other barriers to trade at the multilateral level, a state may diminish the preferences afforded to another group of states. An example where this led to a stumbling block situation is seen in the attempts of the United States to reduce tariff levels of certain spirits multilaterally; doing so would diminish the preferences afforded to some Caribbean countries.[14] Further, regional agreements can increase the incentives among members of the bloc to engage in trade diversion and thus make intra-bloc imports artificially more desirable. For example, South-South free trade agreements may act as a stumbling block by supporting import-substituting industries within that bloc.[15]

These regional arrangements are not limited to only a stumbling block role; scholars have also argued that the regional trade agreements act as building blocks and enhance trade.[16] A state may want to maintain multilateral most-favored nation levels. With this preference, regional efforts may be used as

[12] See, among others, Bhagwati (2000), Cho (2001), Cooper (2010), Krueger (1997, 1999).
[13] See, among others, Lendle (2007), Limão (2006).
[14] Limão and Karacaovali (2005) in Lendle (2007)
[15] Baldwin (2005)
[16] Cooper (2010), Lawrence (1999), Lendle (2007)

building blocks by creating a situation of "competitive liberalization" or a "liberalization juggernaut."[17] Alternatively, regional efforts may also prove to be building blocks by allowing policy-makers to lock in trade-liberalization policies that would have otherwise been unfavorable at the multilateral level.[18] In this way, the preferential trade agreements lead to an efficient outcome by producing convergence.[19] Policy-makers are able to sequentially attain the level, timing, and type of trade liberalization they want while bypassing or minimizing any potential negative domestic audience costs or electoral repercussions.

Additionally, regional free trade agreements can act as a stumbling or building block via the negotiations associated with the agreement; these negotiations may exceed or impede the terms offered at multilateral negotiations of the WTO.[20] Regional arrangements provide states with an outside option in negotiating these barriers and/or can lead to negotiations in those same trade issues covered under the GATT/WTO.[21] However, anecdotal evidence does suggest that regional bodies may not always be stumbling blocks in this way. Increases in the number of preferential agreements did not lead to deadlock in the Uruguay Round of negotiations and it is many of the same countries that played a key role in the Uruguay Round that were, and continue to be, the states establishing regional and bilateral free trade agreements.[22]

The stumbling or building block behavior of regional trade agreements could also be a function of the features of the arrangement. Specifically, the characteristics of the states in the preferential relationship,[23] the scope of the preferential agreement across goods and services,[24] resistance or support coming from domestic groups,[25] and benefits accrued by engaging in certain policies can influence whether the arrangement is a stumbling or building block toward multilateralism.[26] Further, these

[17] Baldwin and Freund (2011)
[18] Cho (2001)
[19] Cho (2001). This is observed in the NAFTA where the basic legal structure of the National Treatment element of the GATT (GATT Article III) and the dispute settlement mechanism were incorporated (Cho 2001, 457).
[20] See, among others, Bhagwati (1992), Cho (2001), Hudgins (1995/1996), Panagariya (1999).
[21] Mansfield and Reinhardt (2003)
[22] See, among others, Baldwin and Freund (2011), Cho (2001), Sampson (1996).
[23] Cho (2001); Kono (2002, 2007); Saggi (2006)
[24] Burfisher, Robinson, and Thierfelder (2002), Mansfield, Milner and Pevehouse (2008)
[25] Cho (2001), Levy (1997), Mansfield, Milner and Pevehouse (2008), Wei and Frankel (1996)
[26] For example, South-South free trade agreements may act as a stumbling block by supporting import-substituting industries within that bloc (Baldwin and Freund 2011).

regional arrangements may be complements to the multilateral system in place. The NAFTA, for example, was able to achieve liberalization in trade, foreign investment, and other issue areas that were not covered by GATT/WTO.[27]

A dispute settlement body may play a similar stumbling or building block role; these bodies play a key role in trade liberalization efforts. The rulings issued assist states in attaining agreed upon trade liberalization when the other member state(s) fails to abide by its commitments. Further, these international dispute resolution alternatives – or forums – provide states with the opportunity to select the venue that provides the greatest benefits and fewest costs. Regional trade dispute settlement mechanisms thus provide a "cherry-picking stumbling block"; a state can pursue and attain the same things both multilaterally and regionally but the state can incur fewer costs when doing so regionally.[28] Existing research has not, however, considered that the regional dispute settlement bodies can act as a stumbling or building block towards multilateral trade dispute resolution. This research fails to address that states are able to gather information from experience – i.e., learn-by-doing – and apply that information to future trade dispute resolution endeavors, either regionally and/or multilaterally. Herein I close this gap by assessing if states, through the information learned in previous regional experience, apply the knowledge ascertained to make it more likely to utilize the regional forum in the future – and thus be a stumbling block – or to use this knowledge as a building block toward multilateral dispute resolution.

### 1.1.2 Understanding State Learning In International Relations

Given the emphasis on "learning by doing" – and how it varies based on the characteristics of the state – in discussions of regional trade agreements as building or stumbling blocks, what exactly is involved in this learning? How and when do states learn at the international level? How does state learning change policy outcomes? Most importantly for understanding both the choice to go regional and the choice to go regional *over* a global, multilateral forum, how can learning vary across time, states,

[27] Lawrence (1999)
[28] Baldwin and Freund (2011), Lendle (2007), Levy (1997)

capacity constraints, and experiences? As discussed in the previous section, what makes a regional body a stumbling or building block toward multilateralism is based on what is gathered and learned through experience and how that knowledge is applied in the future. A state is thus both the producer and consumer of knowledge and information when learning from its own experiences. The stumbling or building block role comes from whether the state gathers, interprets, and internalizes this information in a way that increases the ease and decreases the costs of going regional in the future or to do these things with regards to multilateral endeavors. Given that learning is essential in understanding the stumbling or building block role of regional dispute settlement bodies, it is important to address research on learning before proceeding to my argument and empirical analyses.

Learning is a voluntary and deliberate action that adjusts beliefs, goals, and/or policy actions or a state's confidence in those beliefs in light of past policies and experiences to reduce uncertainty about the world and to facilitate the ability of a state to achieve its goals.[29] Further, learning is distinct from some other related phenomenon: competition emphasizes the influence of the competitive dynamics between states and the policies associated with this competition; copying involves no internalization of information; emulation involves diffusion of the ideas behind the policies/programs states engage in without providing knowledge of what is at stake; coercion involves pressure from an external force or actor; and socialization is the process through which a new member of a group becomes incorporated into organized patterns of interaction.[30] A state does not only learn from its own experiences; it can also draw lessons from the experiences of others. When learning occurs across state borders, it is a form of horizontal international policy diffusion.[31] Horizontal and vertical diffusion involves the spread of ideas across international organizations and actors, states, and domestic actors. For example, vertical diffusion can occur via coercion in the conditions attached to loans offered by international financial institutions.[32]

[29] Hall (1993, 278), Levy (1994), Meseuger (2005), Simmons et al (2006).
[30] Dolowtiz and Marsh (2000), Johnston (2001), Meseuger (2005, 73), Rose (1993), Stone (1999), Simmons et al (2006), Styker and Statham (1985, 325).
[31] Knopf (2003), Simmons et al (2006). See also Hutnick (2013) for influence of direct and indirect learning in international trade disputes.
[32] Meseuger (2005)

Many scholars have undertaken efforts to understand learning at the state level. Some have focused on non-rational or bounded-rationality models of learning while others have focused on rational or Bayesian models to characterize how states learn from information provided from experience and from other states and actors in the international system. Rational learning involves the gathering and interpretation of all available information in the same manner, which would lead to a convergence in policy choices and outcomes.[33] In rational learning, states take all available information into account, assess it in a uniform manner, update beliefs according to the observed information, and then make decisions based on those updated beliefs. Non-rational learning, in contrast, focuses on only certain subsets of information and/or analyzes information in differing ways.[34] This type of learning may also manifest when states are faced with a great deal of stress or emotion and incorrectly perceive or interpret information and experiences.[35]

The differences in these approaches demonstrate the importance of understanding the act of learning. Early studies of learning focused on classifying and defining this phenomenon. The two things this early research sought to accomplish were: first, uncover whether learning changed a state's beliefs and/or perspectives and if these changes yielded more effective policies; second, creating a distinction between learning that changes the means but not goals of policies – simple learning – and learning that involves a change in preferences and thus policies – complex learning.[36] According to Levy (1994), when learning occurs an actor updates its beliefs and will thus have different expectations associated with the consequences of behavior; as a result, an actor will respond differently to identical scenarios at different points in time (297). Learning is a multifaceted phenomenon, which is represented by the wide array of approaches and discussions defining and understanding learning.

[33] Jervis (1976,11) argues in rational models, evidence is interpreted in a way that conforms with generally accepted rules of drawing inferences. See also, Gerber and Green (1998), Jensen and Lindstadt (2012), Meseuger (2005, 72), Wiegand and Powell (2011)

[34] Jervis (1976, 11) states that irrational models violate elements of the scientific method and are less likely to lead to accurate perceptions and effective policies. See also, Meseuger (2005, 72).

[35] Conflict literature has found that these stressful situations that lead to misinterpretations arise as a conflict escalates (Leng 2004; Moore 1995).

[36] Knopf (2003, 189)

Given the importance of state learning in assessing the stumbling or building block role of international trade dispute settlement bodies, and how it varies, it is important to understand how state learning fits in with these models of learning. Some research has posited that states themselves are not active, learning entities but instead are comprised of individuals that are these things.[37] State learning may thus differ across different collectivities. The first relevant collectivity is the group of individuals that make up the decision-making apparatus. In research focusing on states as a collective, individual learning is aggregated to understand the learning of the collective.[38] Learning occurs within states based on an individual's support and promotion of policies proven to be successful.[39] The second relevant collective that may be helpful in understanding state learning is its membership in a particular collectivity of states in an international organization. International organizations are important for the learning process; they help classify, categorize, and provide information that allows what a state learns to converge around a particular idea and/or outcome.[40] Further, evidence of learning at the organizational level is observed as policy experiences and become part of the doctrines, structures, decision-making procedures, personnel arrangements, and/or commitments of the organization.[41] This effect may not, however, be consistent within and across international organizations.[42]

Since these collectivities differ, learning is not a consistent phenomenon across states. Similar to each student in a classroom, each state learns at a different rate. Levy (1994) says that if learning were consistent across states it would be "epiphenomenal."[43] Haas and Knopf have presented the idea that learning is a shared and international phenomenon and it is agreement among states, either within or outside of international organizations, that facilitates learning.[44] Whether or not learning occurs and the magnitude of learning can vary based on a number of factors. First, the learning capabilities of a state –

[37] Farkas (1998)
[38] Levy (1994)
[39] Farkas (1998)
[40] Barnett and Finnemore (1999), Inkpen (1998) Jacobson and Weiss (1998), Levy (1994)
[41] Levy (1994)
[42] Inkpen (1998), Siebenhüner (2008)
[43] In Knopf (2003, 193).
[44] Haas (1990), Knopf (2003)

i.e., its ability to gather, interpret, and internalize the information – can play a key role in this variation.[45] A state that is more greatly constrained by its learning capabilities may learn less from information that is highly technical, complicated, and/or costly. These constraints can be ameliorated based on facets of the institution that provide assistance to states to overcome these learning capability constraints.

Second, the source of the information associated with the learning process may influence what is learned and thus the impact on the relevant outcomes. When learning occurs across borders, information may be more/less credible and/or persuasive depending on how similar the state is to another state.[46] For example, Jensen and Lindstadt (2012) look at how states learn based on the types of policies enacted by particular types of countries. They find that tax cuts by left governments lead to learning by other governments; these left governments are apparent policy leaders because it goes against these government's general policy preferences.

The source is also important when considering if a state is learning from its own experiences or the experiences of others. Wiegand and Powell (2011) argue that states use information from their own and their partner's previous experience to make decisions on future methods/policies. However, learning from the experiences and/or history of others presents its own set of issues in translating what is learned by a state into effective policy. When one actor has engaged in some activity that has resulted in a preferred and/or successful outcome, another state may try to learn from this activity/policy.[47] However, learning from the policies/actions of others may not always yield the same successes as they did originally.[48]

The source may also create variation in terms of the time horizon of learning. States may focus on and learn from information from the most recent events or learning can be cumulative and iterative. The iterative process deals with the idea that a state will implement policies when it learns from some set of information and that state, and potentially others, will continue to learn from this new, resultant

[45] Levy (1994), Stone (1999)
[46] Halpern (1997), Johnston (2001, 491), Kuklinski and Hurly (1996: 127), Valley, Moag, and Bazerman (1998: 230).
[47] States look at policy experiments engaged in under similar conditions conducted elsewhere by other states under conditions of uncertainty (Stone 1999, 54).
[48] Dolowitz and Marsh (2000, 17).

policy.[49] By cumulative, this means that each official in the state learns from not only their own experience but also all of the experiences of the past.[50] What information is relevant in the learning process and the manner in which is it assessed against previous information may influence what and how much is learned by a state.

It may not only be the source but also the type of information provided that explains differences in levels of learning. The third factor that can influence the occurrence and magnitude of learning is the level of initial uncertainty and the divergence between expectations and outcomes.[51] Policy failures, for example, would present the greatest divergence between expectations and outcomes. Indeed, it is policy failures that states learn from; policy successes provide insight into which policies a state should pursue and/or continuity of the same policies.[52] Wiegand and Powell (2011) find support for the idea that policy successes lead to continuity. They find that states learn from positive and negative previous experiences and use this information to select the policy that proved to be positive in the past.

The final factor that is expected to influence the occurrence and degree of learning is the context. Context can be determined by history, institutional structures, domestic attributes, state preferences, and/or political culture.[53] These elements can influence both the relative significance of the information provided through experience as well as the lens through which it is interpreted. Context is not limited to state-specific elements and features that can influence the interpretation of information culled from previous activities and experiences. For example, it is possible that what a state learns from a singular experience may also differ based on what role it played in the process.[54] Playing a certain role provides a certain set of information. As a result, a state that enacts a barrier to trade that is inconsistent with its obligations as a member of a regional trade agreement – i.e., participates in a dispute as the respondent –

[49] Knopf (2003)
[50] Bala and Goyal (1995), Busenberg (2001), Lebovic (1995), Modelski (1990)
[51] Jensen and Lindstadt (2012), Wiegand and Powell (2011)
[52] Levy (1994, 304), Meseuger (2005)
[53] Acharya (2004), Checkel (2001, 443), Cortell and Davis (1996), Farkas (1998); Inkpen (1998); Jensen and Lindstadt (2012); Jervis (1976), Johnston (2001), Levy (1994), Stone (1999, 54).
[54] Stein (1994, 1996) finds that the two sides in an adversarial relationship do not share the same learning but the learning is complementary to reach a singular outcome, reduction of conflict.

may learn different lessons from a dispute than the state that is being harmed by the policy and initiates the dispute at the dispute resolution mechanism – i.e., the complainant.

This discussion of the literature on learning demonstrates the manner in which states are able to learn-by-doing at regional trade agreements. This literature provides insight into why there is variation in the stumbling or building block role of these organizations. However, literature on the stumbling and building block role of trade organizations has failed to address that there is the potential for variation in the learning-by-doing that is taking place. This would be useful in explaining not only the stumbling or building block role but also the variation in the degree of each relationship across trade agreements. The factors that influence a divergence in state learning are present in state interactions in disputes at international trade organizations. In this project, I address this theoretical gap by assessing not only how learning-by-doing contributes to the stumbling block role of regional trade dispute settlement bodies but also the variation in the ability of states to learn-by-doing and the magnitude of the stumbling block relationship.

### 1.1.3 International Trade Organizations and Dispute Resolution

In this project, I aim to uncover patterns of use of regional bodies and how states can overcome their own limitations at dispute settlement mechanisms through repeated use of these bodies. I do so while also assessing the stumbling or building block role of a regional organization and how this role may vary. To behave as either a stumbling or building block, a state must learn-by-doing in participation in these organizations. While my argument and empirical analysis is applicable across many elements of regional organizations, my analysis is limited to the dispute settlement mechanisms of regional organizations dedicated to trade and trade liberalization and the World Trade Organization. Focusing on this element of a specific type of regional organization is a good representation of my argument about the stumbling block role of regional trade dispute settlement bodies and the variation in the magnitude of this role for a number of reasons.

First, these dispute settlement bodies vary in a number of ways – including membership, legalization, and procedure, among other things. In terms of variations in membership, for example, I look at institutions with only three members (the North American Free Trade Agreement) to those with five full member states (the Central American Common Market). It is not just the number of the member states that vary; these institutions also vary in terms of the characteristics of the member states. I examine institutions that contain member states with high levels of economic development and extensively diversified economies – i.e., the North American Free Trade Agreement – as well as those with member states with a greater spread of economic development and diversification. Although there are differences in each of these bodies, states use each one in order to pursue the same goal: resolving international trade disputes through a supranational forum.

In terms of procedural similarities and differences, the dispute settlement mechanisms inherent in international trade organizations generally consist of at least two key phases: consultations and adjudication. These two phases provide insight into the interworking of the organization, and its ability to act as a building or stumbling block in two ways: first, the way in which the member states or the organization relate to one another within the organization; and second, the willingness of the member states to use the institution and the institution's independent effectiveness in working with the member states. Although these common features exist, there are important differences across these institutions, such as the level of legalism and who has standing.[55] These differences, among others, can contribute to the way in which the member states use the body, the frequency of use, and the effectiveness of the institution. The characteristics of these organizations can influence both the extent to which these institutions are potential substitutes to the WTO in the effort to resolve an international trade dispute and the magnitude of the influence of potential limitations emerging from different resource and litigation capacities.

[55] For a discussion of differences between the dispute settlement bodies of regional organizations see, among others, Alter and Helfer (2010), Garcia (1997), Gray and Slapin (2012, 2013), Kono (2007), Koremenos (2007), Levy and Srinivasan (1996),Smith (2000), Yarborough and Yarborough (1997). For discussion of specific regional trade institutions, refer to Alter and Helfer (2010), Alter and Meunier (2006), Busch (2007), Bialos and Siegel (1993), Gantz (2007), Garvey (1995), Lopez (1997), Oduor (2005), Pauwelym (2004), among others.

When considering the different ways that a member state can use a regional dispute settlement body and the potential effectiveness of that body, consider two regional bodies – the Andean Community and the Central American Common Market – that include dispute settlement mechanisms modeled off of bodies generally considered to be characterized by high levels of legalism and effectiveness – the European Court of Justice and World Trade Organization, respectively.[56] Both of these institutions consist of multi-stage procedures that are available when a dispute arises between member states of the institution. The specifics of these procedures can aid in understanding the available pathways and mechanisms to resolve the dispute and the patterns of use demonstrated in figure 1.1. For example, in the Andean Community it is the General Secretariat that is charged with investigation and authorization of corrective measures for dumping or subsidies while such procedures are done by the domestic authority in the member states of the North American Free Trade Agreement. The dispute settlement mechanism of the Andean Community, however, does not have the necessary components to impose fines for non-compliance with obligations but can authorize the suspension of concessions in response to a state's non-compliance with institutional obligations, which can inhibit its effectiveness in the long-run.[57] The Court is considered one of the most important institutions in the Andean Community in efforts to further regional integration among member states.[58]

The dispute settlement mechanism of the Central American Common Market, which includes phases for consultations, intervention by the Council, and arbitration before a Tribunal, has been used much less frequently than that of the Andean Community. Further, the judicial body of the Central American Common Market has a history of dormancy; this body remained dormant and ineffectual until 1991, when the Protocol of Tegucigalpa was signed.[59] This protocol established a Court of Justice to address disputes associated with implementation and non-compliance. This institution was further enhanced in a 2002 amendment which established a separate dispute resolution mechanism for

[56] Alter and Helfer (2010), Biukovic (2008), Cortázar Mora (2004)
[57] Cortázar Mora (2004, 298)
[58] Biukovic (2008, 282)
[59] See Leathley (2007, 203). The dormancy of the CACM was due in part to the political turmoil in Central America.

complainants and non-compliance with elements of economic integration in the organization. However, the effectiveness of this institution is limited by language that allows for restrictions on the binding nature of decisions issued by the court.[60] Similar to the Andean Community, there are no provisions for the enforcement of the rulings by the arbitration tribunal in the Central American Common Market dispute settlement mechanism.[61] Despite this element of the institution, there has been repeated use of the Central American Common Market; yet, it has predominantly resulted in use to reach a mutually agreed upon settlement between the parties in the dispute. Of twenty disputes initiated between 2003 and 2010, only one had a decision issued by the Arbitral Tribunal.[62]

These institutions provide two examples of the differences across the regional trade dispute settlement mechanisms and how these characteristics can influence the effectiveness of the institution in resolving international trade disputes as well as its stumbling block effect. These key differences in the dispute settlement mechanisms of the regional trade organizations provide insight into how, when, and in what ways a state can learn through its previous experiences and how, and extent to which, that knowledge can be applied in the future. These different bodies provide a cross-section of states and their relationships, which will be key in providing a generalizable explanation of how states learn-by-doing through previous use of the body, what explains differing rates of learning, and thus variation in the stumbling or building block effect of regional organizations in dispute resolution. Further, looking at diverse dispute resolution bodies in international trade institutions provides a clear and observable policy choice to assess the stumbling or building block effect of learning-by-doing: dispute initiation that results from forum shopping.

Given that I use international trade dispute resolution bodies to demonstrate how states learn through international organizations and how this learning contributes to the stumbling block role of the regional alternatives, it is important to understand why a state would initiate a dispute at the dispute

[60] Biukovic (2008, 265).
[61] Biukovic (2008, 276)
[62] See <http://idatd.eclac.cl>. One of these twenty disputes is currently in arbitration. In some of these disputes, mutual agreement was reached after intervention by the Council of Ministers.

settlement bodies of regional organizations and/or the WTO. To do so, I first discuss literature on forum shopping between regional bodies and the WTO. Forum choice, which results from a state forum shopping, is the choice of between two or more alternatives with overlapping jurisdiction on a particular issue or issue area. The decision between a regional organization and the World Trade Organization is one manifestation of a phenomenon referred to as forum shopping. Forum shopping is a consideration in regional institutions like the CACM and Andean Community where, for at least part of the institution's history, there has been the possibility for competing jurisdictions.[63]

The phenomenon of forum shopping is prevalent within and across national borders and issue areas. Within the United States, for example, forum shopping occurs in patent disputes. These patent disputes are not evenly spread out across the ninety-four district courts that could resolve these disputes.[64] Internationally, forum shopping can occur in trade disputes, land disputes, and human rights issues, among other things.[65] This research has demonstrated that the relevant actors – individuals, corporations, states, etc. – engage in a decision-making process to select the most preferred body to address a particular dispute and/or policy. Forum shopping is thus not limited to just the choice between regional trade institutions and the WTO. It can also manifest itself in the choice between forums at the domestic level and between forums at the domestic and international levels.

Many legal scholars have examined the issues associated with forum shopping from the legal perspective – including the benefits and detriments of this procedure and suggestions for reform to address it.[66] This research has focused on qualitatively assessing forum choice, primarily at or involving the domestic level. It focuses on explanations based in legal rationale, expectations, and attaining efficient outcomes. The forward-looking element expected to influence forum choice comes from the party's perceptions and expectations, which have been acquired by learning from information in the past.

[63] Biukovic (2008)
[64] Moore (2001)
[65] See, among others, Busch (2007), Davis (2005,2009), Helfer (1999), Hafner-Burton (2005), Huerta-Goldman (2010), Wiegand and Powell (2011 ).
[66] For legal research see, among others: Clermont and Eisenberg 1995; Dowling 1995; Hillman 2009; Juenger 1994; Kwak and Marceau 2002; Lear 2009; LoPucki and Whitford 1991; Marceau and Wyatt 2010; McGarity 1980; Moore 2001; Rasmussen and Thomas 2000; Whitten 2002.

Forum choice can be influenced by the party's expectation of outcome, the reputation that the particular forum has, and/or the parties' perceptions on the level of bias and trustworthiness of the forum.[67]

Beyond legal scholarship, there is some existing political science literature examining forum choice, specifically in international trade disputes. This research has focused on forward-looking preferences and domestic pressures. Busch (2007) presents an argument that echoes the arguments made in legal scholarship; using a spatial model and case studies, he argues that states make the strategic choice on forum based on precedent setting preferences. This argument is based on the idea that a state's choice of forum is forward looking. A state selects a particular forum based on the expected precedent and how that might influence future disputes. Davis (2005, 2009) follows a similar line of logic to explain the choice of forum. She argues that the preferences of domestic lobbying groups and governments help to explain the choice of forum. This is due to the fact that the selection of a particular venue will lead to a choice of a set of rules, or forum, which will favor the domestic group's preferred outcome. Since the choice of forum is based on the chances of getting a favored outcome, there is a selection effect for the types of cases that reach each type of forum. Davis argues that the harder disputes are filtered to multilateral forums such as at the World Trade Organization (WTO) while the easier issues are solved in bilateral or regional forums. In analyzing forum shopping in international trade disputes, neither Busch nor Davis use a large-N data set to empirically examine the reasons for choosing a certain forum to resolve disputes.

The arguments and findings in Busch (2007) and Davis (2005, 2009) build off not only legal scholarship on forum shopping, but also existing literature on initiation of disputes at the WTO. Scholars have examined many of the fundamental elements of the dispute settlement mechanism of the WTO. This includes the composition and characteristics of the dispute settlement structure itself and disputes that reach the dispute settlement body,[68] use of the body and reasons for dispute initiation,[69] the escalation

[67] See, among others, Dowling (1995), Juenger (1994), LoPucki and Whitford (1991), Moore (2001)
[68] See, among others: Busch and Reinhardt (2002), Ethier (2001), Garrett and McCall Smith (1999), Holmes, Rollo, Young (2003), Schwartz and Sykes (2002), Zangl (2008).
[69] See, among others: Bown (2004b, 2004c, 2005a, 2005b), Busch (2007), Busch and Reinhardt (2002, 2003a), Horn, Mavroidis, and Nordström (1999), Iida (2004), Reinhardt (2001), Sattler and Bernauer (2007).

of disputes from the consultation to the panel stages and beyond,[70] the record of compliance,[71] and the punishments associated with failure to comply.[72] Particularly important in understanding choice of forum is extant research on the use of the WTO dispute settlement body by developing countries.[73] In these studies, the disadvantages faced by developing countries at the WTO dispute settlement body become quite apparent. The elements of the institution and constraints faced by developing countries help to explain the differences in the patterns of use between this group of states and their more developed counterparts at this body. Further, research on the ability of developing countries to overcome these constraints provides insight into the potential capacity building benefits of forum shopping.[74]

Each of these strains of literature has helped to provide a better picture of not only the dispute settlement mechanism at the WTO but also the different elements that influence each stage of the process. While arguments on WTO dispute initiation have primarily focused on issues associated with power disparities, trade preferences, as well as legal, economic, and political capacity constraints, the variation in the litigation procedures is also important for assessing dispute initiation when alternatives are available. It is important for understanding multilateral dispute initiation because these procedures have varied between the dispute settlement mechanism under the General Agreement on Tariffs and Trade (GATT) and the WTO.[75] It is important for the forum shopping decision and regional initiation because, while many states drew from the GATT/WTO in developing regional dispute settlement bodies, they are not exact copies of this model and these regional mechanisms have also changed over time.[76]

While research on dispute initiation, escalation, and compliance at the WTO has been quite extensive, research on initiation at regional bodies is generally limited to case studies and legal

[70] See, among others: Busch (2000), Busch and Reinhardt (2002), Guzman and Simmons (2002)
[71] Epstein, O'Halloran, and Widsten (2009), Horlick and Coleman (2007), Hutnick (2010), Johns and Rosendorff (2009)
[72] See, among others: Anderson (2002), Hoekman and Mavroidis (1999), Johns and Rosendorff (2009), O'Connor (2004).
[73] See, among others: Bown (2004a, 2004b), Bown and Hoekman (2008), Busch and Reinhardt (2002, 2003a, 2003b), Davis and Bermeo (2009), Guzman and Simmons (2005), Hoekman and Mavroidis (1999), Horn, Mavroidis, and Nordström (1999), Michalopoulos (2001).
[74] Davis and Bermeo (2009) find that previous experience at the WTO – as a complainant, respondent, or third party – is an important predictor for developing country use of the WTO DSB.
[75] See, among others, Bown (2002), Busch (2000), Busch and Reinhardt (2002, 2003), Hudec (1993), Mavroidis and Palmetter (2004), Reinhardt (2001).
[76] Regional bodies have also changed over time. See Pan (1999) for discussion of changes in dispute settlement mechanism under the US-Canada Free Trade Agreement to the mechanism at the NAFTA. The Mercosur system also changed between the Brasilia and the Olivos Protocols (Biukovic 2008; Leathley 2002; Lemmo 2002).

scholarship.[77] A key exception to this is a forthcoming article by Gomez-Mera and Molinari, who examine initiation of disputes at the dispute settlement mechanisms of South American trade organizations. These authors find that regional dispute initiation is predicted by power asymmetries between disputing parties and domestic political factors. This study also found that previous experience at a forum has an important effect. They find that experience regionally and at the WTO influences regional dispute initiation.

In addition to literature on dispute initiation and progression at the WTO and regional bodies, extant literature also examines the use of international courts to resolve interstate disputes in general as well as the design and effectiveness of regional dispute settlement mechanisms.[78] In terms of differences in design, these bodies vary in terms of private party capabilities to use the institution[79] and their level of legalism.[80] Design elements, specifically the level of legalism, may explain use of a dispute resolution forum.[81] While there has been research looking at the variation in the legal features of different regional trade dispute settlement mechanisms, most empirical research on the resolution of trade disputes through these mechanisms have focused more on particular institutions and arrangements instead of comparing dispute settlement mechanisms across these regional institutions.[82] It is important to consider these arguments for regional initiation across these forums because of the domestic political differences in the member states of regional arrangements. For example, the costs associated with the use of the forum could be domestic – i.e., there is more political cover at one forum than another.[83]

[77] Huerta-Goldman (2010) discusses Mexico's choice to resolve disputes before the NAFTA or the WTO. Heidrich and Tussie (2010) examine the interdependencies between the dispute settlement mechanisms of regional agreements and the WTO. Delich (2005) surveys the use of regional dispute settlement bodies in South America. Ryan (1991) and Sykes (1992) examine the choice of the US between the GATT/WTO and unilateral mechanisms to resolve trade disputes. Fang (2010) also examines the role of the institution's capacity on the choice between the WTO dispute settlement body and resolution via bilateral bargaining.
[78] See, among others: Alter and Helfer 2010; Garcia 1997; Gray and Slapin 2009; Johns 2012; Kono 2007; Koremenos 2007;Smith 2000; Yarborough and Yarborough 1997.
[79] Levy and Srinivasan (1996)
[80] Smith (2000)
[81] See among others, Chayes and Chayes (1995) and Downs, Rocke and Barsoom (1996). For example, Kono (2007) finds that an increase in the level of legalism does not increase the liberalization of trade.
[82] See, among others: Alter and Helfer 2010; Alter and Meunier 2006; Bialos and Siegel 1993; Busch 2007; Gantz 2007; Garvey 1995; Lopez 1997; Oduor 2005; Pauwelym 2004.
[83] See, among others, Allee and Huth (2006), Mansfield, Milner, and Rosendorff (2002)

Existing research on forum shopping and dispute initiation focuses on a key element: expectations. These expectations come from the knowledge acquired by via learning-by-doing, i.e., having previous regional dispute experience. The premise that previous experience plays a key role in dispute initiation was assessed at the WTO and regional level. At the WTO level, both Conti (2010) and Davis and Bermeo (2009) assess the effect of previous experience on disputes. Conti examines the effect of previous experience on the escalation of disputes while Davis and Bermeo find that previous experience is an important predictor for developing country use of the dispute settlement mechanism at the WTO. For developing countries, Davis and Bermeo find that learning to use the system, as either a complainant or respondent, decreases the startup costs associated with initiating a dispute, which can increase the likelihood of initiating future disputes. The role of previous experience was also examined for regional initiation by Gomez-Mera and Molinari (2013), who find that previous regional and WTO experience, as either a complainant or respondent, influences the likelihood of initiating a dispute at a South American regional dispute settlement body. Previous experience can help states to gather information to decrease transaction costs associated with simply using the forum and reduce uncertainty surrounding the outcome. The research that has assessed previous experience insufficiently answers the question of why states utilize regional bodies in a number of key ways. Most importantly, this research has failed to assess the effect of previous experience in the decision *between* the regional and WTO forums to resolve a dispute. As such, it does not demonstrate how a regional body may behave as a stumbling or building block toward multilateral dispute resolution.

## 1.2 Methodology and Findings

Building off of the literature presented in the previous sections, I develop my argument regarding the conditional effect of previous regional dispute experience on the likelihood of initiating a regional dispute in the future. These are empirically assessed using a newly collected data set and supported by anecdotal evidence of the relationship between previous regional dispute experience, learning capacity, and future forum choice. The newly collected data set used in the quantitative analysis captures use of

regional and multilateral dispute settlement bodies in the western hemisphere between 1995 and 2010. Specifically, I have gathered data on use of: the Andean Community (CAN), the Central American Common Market (CACM), the Common Market of the South (MERCOSUR), North American Free Trade Agreement (NAFTA), and the World Trade Organization (WTO). I include data on disputes between full member states of the institution. Since I only consider disputes between full members of the organization, there is no overlap to allow for multiple regional institutions to adjudicate and/or influence the resolution of international trade disputes. Specifically, I examine: disputes between Bolivia, Colombia, Ecuador, Peru, and/or Venezuela, which can be submitted to the dispute settlement mechanisms of the Andean Community or the WTO; disputes between Costa Rica, El Salvador, Guatemala, Honduras, and/or Nicaragua, which can be submitted to either the Central American Common Market or the WTO; disputes between Argentina, Brazil, Paraguay, and/or Uruguay, which can be submitted to the Mercosur or WTO; and disputes between Canada, Mexico, and/or the United States, which can be submitted to either the NAFTA or WTO.

For each institution, I have gathered data on the number of disputes initiated at each of the regional forums as well as the number of decisions issued at each forum. This includes when the decision is issued and which body issues the decision – i.e., whether it an executive, judicial, or appellate decision issued in an effort to resolve the dispute. For the NAFTA decisions, I have also gathered data on the type of ruling. After reading the decisions issued by the panel in each NAFTA dispute, I categorized the ruling as one of three types based on whether the panel held the measure to be inconsistent or consistent with the member state's NAFTA obligations. These categories are: remand, mix, affirm.

This data on previous use is gathered based on the forum used, the relevant directed dyad in the dispute, the subject area of the dispute, and the year of dispute initiation or that a decision is issued. Doing so allows me to accurately assess whether learning-by-doing is subject- and/or dyad-specific as well as its cumulative nature. Given the nature of experience at these institutions and my conceptualization of learning, the unit of analysis for my empirical examinations is dyad-year-subject area. I categorize disputes as fitting into one of eight subject areas, which are determined by the

harmonized system codes and authored defined coding rules.[84] I use the data collected in this original data set to assess the effect of previous experience on future forum choice. To do so, I categorize future forum choice according to a four part categorization: no dispute initiation, regional dispute initiation, WTO dispute initiation, or initiation at both the regional and WTO dispute settlement bodies. Given the nature of my dependent variable, I utilize a multinomial logit model for each of my estimations. This characterization of future forum choice also allows me to accurately capture the stumbling or building block effect of regional dispute settlement bodies by looking at the effect of previous regional dispute experience on the likelihood of initiating a regional dispute in the future relative to the likelihood of initiating a WTO dispute in the future.

Overall, I find robust support for my expectations associated with the stumbling block effect of regional trade dispute settlement bodies. My empirical results demonstrate two key things. First, the results show that many different conceptualizations of a state's previous regional dispute experience are associated with an increase in the likelihood of regional dispute initiation. Second, my findings show that this effect varies based on a state's learning capacity. The greatest effect is observed when examining the relationship between previous experiences of a directed-dyad in a particular subject area on future forum choice. However, a positive and statistically significant relationship is observed when looking to the effect of dispute initiation experiences across regional member states, over a five-year period for the directed-dyad, the number of decisions issued in disputes for the directed-dyad in a particular subject area, and for specific types of decisions issued at the NAFTA for a directed-dyad in a particular subject area. For each measure of previous experience, the effect not only varies based on learning capacity but also across the different measures used to operationalize the ability and incentive components of learning capacity. These results indicate that states are able to learn-by-doing but that the extent of this effect is not consistent across states and/or dyads.

[84] These subject areas are: agriculture, primary commodities, low-technology manufacturing, machinery/electrical, miscellaneous, services, intellectual property, and genera/unclear. The first five subject areas are determined by the harmonized systems codes associated with goods traded among states. The final three subject areas are defined by the author and capture those disputes that do not include an associated harmonized systems code or cover a wide array of products. The general/unclear category also captures disputes that cited harmonized system codes that are captured in multiple subject areas.

## 1.3 CONTRIBUTION

In its current state, scholarly research on the stumbling/building block role of regional trade dispute settlement bodies, state learning, and forum shopping in international trade disputes leaves prominent questions insufficiently answered. The holes are both theoretical and empirical. In this project I aim to fill both gaps in the literature by examining how a state learns from its previous experiences in disputes before the trade dispute settlement mechanisms of the WTO and regional trade dispute settlement bodies and how the influence of previous experience varies across different types of states. I argue that states learn-by-doing; a state utilizes the information gathered through previous use of the body to develop an infrastructure to reduce costs and uncertainty surrounding dispute resolution at a forum. Given the divergence in the costs and resource constraints associated with utilizing a regional body or the WTO, I argue that this reduces the major drawback of utilizing a regional body: greater uncertainty. As a result, regional dispute settlement bodies act as a stumbling block toward multilateral trade dispute resolution. However, as discussed above, learning is not consistent across all actors. I argue that the stumbling block effect of regional trade dispute resolution bodies will vary based on the differences in the learning capacities of states, which is determined by development status and the dyadic relationship between the disputing parties. By making and testing this argument, I fill key theoretical and empirical gaps in existing literature.

First, my argument and analyses provide a theoretical contribution by contributing insight into how states learn about the systems that they use and adjust their behavior according to these experiences. The use of an institution goes beyond learning more about institutional design and procedure; each experience builds upon the previous ones to inform not only state preferences but also influence state strategies. This result is particularly important in analyses of the disadvantages faced by developing countries at international organizations, particularly at the dispute settlement mechanisms of international trade organizations. Developing countries have a relatively lower amount of economic, political, and legal resources to uncover, analyze, litigate, and enforce violations of international law. At the World

Trade Organizations, the disadvantages are well documented and are explicitly addressed in the inclusion of the WTO Advisory Centre to help overcome the gaps between developed and developing countries in litigation capacity. At many other organizations, including the dispute settlement bodies of regional organizations, such a mechanism is unavailable. The theory and findings in this project demonstrate that states can enhance their litigation capacity through their own endeavors. Additionally, it provides nuance to existing literature on learning-by-doing in international trade organizations by considering that even within these organizations the effect may vary. This project thus provides greater insight into the literature on state learning within and through international institutions and how learning can address disadvantages faced by certain groups of states.

The second theoretical contribution stems from the gap in the literature on forum shopping in international trade disputes. I will add to the sparse literature on forum shopping in international trade disputes by emphasizing the role of learning from previous experiences and how states may be able to overcome limitations at relevant forums by learning from their own experiences. Furthermore, this analysis extends forum shopping beyond analysis of specific disputes. I argue, and present evidence to support, that the forum shopping decision is based on what has happened in the past because it influences future considerations. Neither my theory nor analyses are limited to a subset of disputes or one particular organization. I approach forum shopping as a phenomenon that occurs across time, member states, and trade organizations. While existing literature on regional and WTO dispute initiation has considered the effect of previous experience, it has failed to consider its effect in the forum shopping decision undertaken by states. Without considering its effect on forum shopping, it is insufficiently answering the question of whether or not states learn from previous experience and how those lessons are applied in the future.

The most important contribution of this paper derives from an unanswered question in the literature on regional trade organizations: are regional trade dispute settlement bodies stumbling or building blocks toward multilateralism. Existing research on this question has only focused on the economic effect, i.e., the effect on trade and trade liberalization. However, the dispute settlement bodies

play a key role in trade liberalization and trade relations in general. By assessing the role of learning-by-doing from previous experience on choice of forum in international trade disputes, I will be able to assess if states learn from the information acquired in the past and use that information at the regional or multilateral level. Doing so will further contribute to the understanding the stumbling or building block role of various elements of international institutions by examining how states facing structural disadvantages at a multilateral forum, as is well documented in the literature on WTO trade disputes, can overcome these obstacles by moving to the regional level to resolve international trade disputes. The analysis of the dispute settlement body as a stumbling or building block will provide insight into the role that these regional arrangements play in international trade relations.

The main empirical contributions stem from the data set that I have created on international trade disputes at regional bodies and the WTO. Thus far, empirical research on forum shopping and patterns of developing country use of these bodies has focused on a specific forum or dispute. There has been no research done, to my knowledge, to collect and systematically analyze the choice of forum by states to resolve trade disputes. To rectify this problem, I have gathered data on trade disputes at select regional dispute settlement bodies in the western hemisphere and the WTO between 1995 and 2010, which was described above. By collecting this data set, I am able to empirically test my theory on the stumbling block role of regional dispute settlement bodies. I utilize data on previous dispute initiation and decisions to examine if states learn-by-doing and the effect this has on mitigating resource constraints and other limitations and, as a result, forum choice. I test whether or not previous experience at a regional forum influences the decision to initiate a future dispute regionally instead of multilaterally at the WTO. This represents the first effort, to my knowledge, to not only accurately assess the stumbling block role of a regional dispute settlement body using a large-N quantitative analysis but also to consider how states learn and differences in their capacities when analyzing the decision to initiate at a relevant international trade dispute settlement forum when accounting for all available alternatives. As previously mentioned, existing research has simply focused on analyzing forum choice by examining a small number of cases or by trying to understand the choice of one particular forum while not including the simultaneous choice to

*not* use another overlapping forum. This data set, and the quantitative analysis that utilizes it, allows me to examine not only the question of the stumbling or building block role of regional dispute settlement bodies but also questions on why states decide to bring their disputes to a regional forum, the role of previous experience in this decision, how previous experience contributes to learning about trade dispute resolution, the variation in learning from previous experiences, and whether learning can be used to mitigate difficulties faced by developing countries at international legal forums.

## 1.4 ROADMAP

In this chapter, I have presented an overview of my argument, empirical approach, and findings as well as a discussion of existing literature on the key foundational elements of this dissertation project. This includes arguments and findings on: the stumbling or building block role of regional organizations; learning by individuals, organizations, and states; theories and evidence of differential learning; dispute resolution at the World Trade Organization and regional trade dispute settlement bodies; difficulties facing developing countries at regional and multilateral international organizations; and, finally, analyses and theories on forum shopping. As discussed, I examine the stumbling or building block effect of regional trade dispute settlement bodies on resolving disputes multilaterally at the WTO dispute settlement body. I have presented a preview on my argument; I focus on the learning-by-doing – and variations in this learning – undertaken by states as a result of previous experience in the dispute settlement bodies of these regional trade institutions. This chapter has laid the foundation for both my theory and analyses.

In chapter 2, I build off of this existing literature and present my theory of state learning through previous experience within international organizations, paying special attention to learning within the dispute settlement bodies of international trade organizations. In this chapter, I present the specifics of my argument on the stumbling block role of regional trade dispute settlement bodies. I delve into how states are able to learn-by-doing through previous regional dispute experience. Through prior experience,

states learn the costs, procedures, and relevant legal interpretations associated with regional dispute resolution. This allows the state to develop and/or enhance the infrastructure necessary for regional trade dispute resolution which will reduce both costs and the uncertainty surrounding the outcomes associated with using a regional forum. However, the ability of a state to learn – and thus the magnitude of the stumbling block effect – varies across states within and across regional trade dispute settlement bodies. The ability to learn – referred to as the state's learning capacity in chapter 2 – is shaped by the state's available economic, political, and legal resources as well as the dyadic economic relationship between disputants. Both elements influence the divergence between a state's expectations and outcomes, which determines the space for learning to occur and the internalization of knowledge gathered through prior experience. While laying out the details and mechanisms associated with my theory, I develop three testable hypotheses.

Once I have introduced the theory that supports this project, I introduce the original data set collected in order to test the expectations put forward in chapter 2. In chapter 3, I discuss and present the variables I have collected for this data set. This new and original data set covers international trade disputes at regional trade institutions in the western hemisphere – i.e., the North American Free Trade Agreement (NAFTA), the Andean Community (CAN), the Common Market of the South (Mercosur), and the Central American Common Market (CACM) – as well as at the World Trade Organization (WTO). I capture all trade disputes initiated by the member states of these organizations at a regional and/or multilateral forum between 1995 and 2010 across eight subject areas. In this chapter, I present summary statistics and graphs to demonstrate the frequency of use by these countries across time and forum.

Using this new and original data set, I first empirically examine the hypotheses developed in chapter 2 in a set of quantitative analyses in chapter 4. In this chapter, I test my hypotheses using a measure of previous dispute initiation. This is the first stage of the formal dispute settlement process; it captures diplomatic interactions between disputing states within the body as well as the adjudication and insight provided by the organization. In this chapter I analyze the effect of previous regional dispute initiation experience when interacted with the two components of learning capacity – development level

and the dyadic relationship of the disputing parties. I seek to delve further into the learning-by-doing mechanism by assessing the subject-specific, cumulative, and general effects of learning from previous experience on future forum choice. In this chapter, I find that the frequency of initiation against a particular state in the past influences the likelihood that a state will initiate a regional dispute in the future, relative to initiating a dispute at the dispute settlement body of the World Trade Organization. Further, I find evidence that the stumbling block effect of regional dispute experience is conditional on the state's learning capacity. I also present anecdotal evidence of the learning that occurs through previous dispute experience, the existence of forum shopping among involved states, and the stumbling block effect of regional trade dispute settlement bodies.

In chapter 5, I seek to parse out the individual effect of these regional institutions by disaggregating previous regional dispute experience. Initiating a dispute against a state does not capture the complete picture of what a state is able to learn or the effect of learning-by-doing. A dispute is a multifaceted event; initiation first occurs, then a decision is rendered by the relevant panel. During the initiation phase, a state has the opportunity to conduct consultations and negotiations that are not necessarily influenced by that particular forum. However, the institution has a key role in the decision issued in a dispute. Looking at the effect of the decisions issued thus provides greater insight into the role that the regional dispute settlement bodies themselves play in state learning and future forum choices. In chapter 5, I assess the effect of these decisions on the likelihood of initiating a regional dispute relative to a dispute at the WTO, i.e., the stumbling block effect of regional dispute settlement bodies. In this chapter, I demonstrate that a state is able to learn about the costs, process, and legal interpretation associated with trade dispute settlement at a regional body when a decision is issued in a previous dispute but that the effect of an increase in the number of decisions issued is smaller than the effect associated with an increase in the number of disputes initiated. Again, I find that the number of decisions issued at a regional dispute settlement body influences the stumbling block effect of regional trade dispute settlement bodies but that this effect is again determined by the state's learning capacity. Additionally, in this chapter I delve further by looking at the effect of different types of decisions. Using data I have collected

on the types of decisions issued by the panel in disputes before the North American Free Trade Agreement (NAFTA), I examine whether or not states learn more from a decision that supports and/or discredits the trade policy at the heart of the dispute. I find that the NAFTA member states learn from each type of decision, but the extent of the effect varies based on both the type of decision and the state's learning capacity.

I summarize my theoretical expectations and empirical findings in chapter 6. In this concluding chapter, I discuss the generalizability of my argument and findings. I demonstrate how my argument and findings can be used to further the research on the stumbling block effect of regional bodies, state learning within international institutions, existing disadvantages faced by developing countries and ways to mitigate them, and the learning-by-doing effect of prior experiences in international activities and interactions. Additionally, I will demonstrate how my argument and findings further the literature on forum shopping in international trade institutions and international institutions in general. I will also discuss the policy implications of this research with regards to the development and use of regional trade organizations.

Overall, the argument and results of this project provide optimism for trade dispute resolution. My results demonstrate that the use of regional organizations provide states with the ability to overcome various constraints through their own efforts. My results provide support for the promotion and cultivation of regional dispute settlement mechanisms, particularly in regions where the member states face greater resource constraints, which can potentially be overcome via learning through experience. Doing so does not hurt the existing multilateral organizations – i.e., the WTO dispute settlement body – given the difference in costs of use between regional and multilateral alternatives and the resource constraints faced by this set of states that limit use of the multilateral alternative. While the regional trade dispute settlement bodies are demonstrated to be stumbling blocks toward multilateralism, it is not unilaterally the case. As such, the multilateral organizations will still be sought after and utilized by a select group of states. As states acquire more and more regional experience, the realization of a more inclusive WTO dispute settlement body may prove to be easier to obtain.

## 2.0 LEARNING AND FORUM CHOICE IN INTERNATIONAL TRADE DISPUTE SETTLEMENT BODIES

When presented with the opportunity for recurrent interactions, involved parties are able to gather information that can be used to adapt behavior in future endeavors. In what ways does this information influence the future behavior of these involved parties? As laid out in the previous chapter, I seek to understand what influences the decision to utilize a regional dispute settlement body to resolve international trade disputes when a multilateral alternative exists, whether a state learns from previous experiences and applies that knowledge in its future international trade dispute resolution efforts, and the variation in this learning. Overall, I am seeking to understand why states utilize the regional forum when an extensive, well-developed, and sophisticated multilateral alternative exists at the World Trade Organization (WTO) by examining the role of previous regional dispute experience on the likelihood of initiating a regional dispute in the future. The opportunity to utilize these regional bodies becomes problematic as these regional alternatives present a "cherry-picking stumbling block" that can be utilized to resolve international trade disputes.[1] Past experiences are useful for understanding the extent of the stumbling block effect of regional dispute settlement bodies as a state gains insight and context as to the best way to achieve the relevant goals associated with trade liberalization and dispute resolution from each of these regional dispute experiences.

This process of gaining insight from past experiences is what is understood as learning, which has a number of key characteristics as defined by this project.[2] First, it is a voluntary and deliberate action that is undertaken by an actor; this allows it to be distinguished from related phenomenon, such as coercion or socialization.[3] Based on this, learning is considered to be a rational endeavor that yields

[1] Baldwin and Freund (2011); Lendle (2007); Levy (1997)
[2] Meseuger (2005), Levy (1994), Hall (1988, 6), Simmons et al. (2006).
[3] Coercion involves pressure from an external force or actor and socialization is the process through which a new member of a group becomes incorporated into organized patterns of interaction. Some other alternative phenomenon that associated with diffusion of information are: competition, which emphasizes the influence of the competitive dynamics between states and the policies associated with this competition; copying, which involves no internalization of information; and emulation, which involves diffusion of the ideas behind the policies/programs states engage in without providing knowledge of what is at stake

convergence in policy choices.[4] Second, learning involves an adjustment in the beliefs, goals, policy actions, and/or confidence in those beliefs based on past policies or experiences. This adjustment allows for a reduction in uncertainty about the world and enhances the ability of the actor that is learning to achieve its goals. Third, learning is not a consistent phenomenon; it varies across actors.[5] This definition does not include horizontal international policy diffusion, which is when states draw lessons from the experiences of other states.[6] This definition limits my analysis to the actions of states, which are purposive actors.[7]

The knowledge that yields learning is not provided in a vacuum. Since learning is not consistent across actors, it is important to understand the conditions under and extent to which this learning occurs when examining state activity. While international organizations have been examined to play a role in the diffusion of the information and lessons provided by the policies of other states in previous research,[8] learning can also be influenced by the member state's own interactions within these international organizations. The characteristics of the member states involved and their dyadic relationship with other parties can structure both the initial experience of a state that provides the information and knowledge as well as the interpretation and ability/preference to learn from these activities and use the information garnered in future activities.

In this chapter, I delve into understanding the relationship between state learning and future regional forum choice in international trade disputes. In so doing, I also examine how the context associated with knowledge acquisition influences these outcomes. Specifically, I argue that states learn

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(Dolowtiz and Marsh 2000; Johnston 2001; Meseuger 2005, 73; Rose 1993; Stone 1999; Simmons et al 2006; Stryker and Statham 1985, 325).

[4] Meseuger (2005, 72)

[5] Levy (1994). Levy argues that "…if everyone learns the same thing than learning is 'epiphenomenal' (Knopf 2003, 193)."

[6] Knopf (2003), Simmons et al (2006). Due to differences in interpretation and barriers to information transmission, learning from another's successful policy/action may not always yield future successes in similar a policy/action (Dolowitz and Marsh 2000, 17). Hutnick (2013) expands the understanding of learning to include horizontal international policy diffusion. It explores the effect of direct and indirect regional dispute resolution experience on forum choice in future international trade disputes.

[7] In contrast, international organizations are not purposive actors, instead these organizations are principles, norms, rules, and decision-making procedures that help to classify, categorize, and diffuse various ideas and pieces of information (Barnett and Finnemore 1999; Simmons et al. 2006, 798). They can thus contribute to the learning process of a state but do not learn. The role of international organizations in this learning process is considered as an alternative explanation and tested in chapters four and five. I find that certain regional trade dispute settlement bodies are important predictors of regional dispute initiation in the future and other forum choice decisions.

[8] See, among others, Fang and Stone (2012), Finnemore (1993), Pevehouse (2002), Simmons et al. (2006).

through previous experiences in these regional forums, which determines forum choice in future endeavors. This mechanism posits that a state learns-by-doing, i.e., a state uses the information gathered from previous regional dispute experience to develop or enhance its dispute resolution infrastructure to reduce costs and uncertainty surrounding dispute resolution at a forum. In so doing, the major drawback of utilizing a regional body – greater uncertainty – is reduced and/or minimized to make the regional forum a more desirable alternative to pursue dispute resolution goals. This affects future forum shopping decisions by not only influencing the likelihood that a state will utilize a regional dispute settlement body in the future but also the likelihood that that regional alternative is selected *instead of* the available multilateral alternative at the World Trade Organization (WTO). The regional forum has a stumbling block effect when the likelihood of future use of the regional forum increases relative to the likelihood of using the multilateral alternative. Learning-by-doing through regional disputes in the past thus contributes to the stumbling block effect of regional dispute settlement bodies.

However, learning – and in particular learning through previous regional experience – is not consistent; as a result, the stumbling block effect of regional trade dispute resolution bodies will vary. Through learning-by-doing states are both the producers and consumers of knowledge. Various elements, which can be influenced by the level of development and the dyadic economic relationships of the states involved – i.e., a state's learning capacity – can determine the context and extent of learning. The state's learning capacity can shape its expectations, the potential struggles faced while learning, as well as the strategies used to learn. This conditions the effect of learning from prior regional dispute resolution experiences and forum choice outcomes. Understanding the context under which information is gathered and interpreted thus provides greater insight into how and to what extent learning-by-doing in international trade dispute resolution is associated with forum choice outcomes in future international trade disputes. In this chapter, I argue that the amount of previous experience a state has at the regional body - and the state's learning capacity – explains future forum choice in international trade disputes, the variation in learning, and how to understand the extent of the stumbling block effect of the relevant regional dispute settlement body.

In making this argument, I fill key empirical and theoretical gaps in the existing literature, which were presented in detail in the previous chapter. Current research fails to, first, assess the ability of states to gather information from previous regional trade dispute initiation experiences – i.e., learn-by-doing – and apply that information to future trade dispute resolution efforts. Literature that has accounted for the effect of previous experience has failed to capture the variation in the ability of a state to learn from previous dispute experience and apply that knowledge to future endeavors. It further fails to empirically capture the state's choice *between* dispute resolution alternatives; a state makes the simultaneous choice to use one method and not use all other available methods to resolve an international trade dispute. In testing this argument – which is the focus of chapters 3, 4, and 5 – I focus on empirically addressing these empirical gaps by taking into account the ability of states to learn from previous experience, the variation in learning, and the choice to utilize the regional dispute settlement body in future trade disputes *instead of* using the multilateral alternative at the WTO.

To make my argument, I first discuss what states learn from their previous interactions and experiences and how that knowledge is applied in future interactions. This will provide evidence that a state behaves as both the teacher and student when learning-by doing in regional trade disputes. After establishing what a state is able to learn from prior experiences and how it is applied, I delve into how previous regional dispute experience is associated with an increase in the likelihood that a regional dispute settlement body is used in future international trade disputes instead of the forum at the World Trade Organization. I then discuss how learning may vary based on a state's learning capacity. I conclude by summarizing my argument and providing a summary of the empirical chapters that test the hypotheses derived below.

## 2.1 State Learning and Regional Dispute Settlement Experience

How does state learning occur through previous regional dispute settlement experience? To understand the relationship between state experience at a regional dispute settlement body, learning, and future forum choice, it is essential to first understand the process underlying the "learning-by-doing"

mechanism posited herein. While a state may learn a number of different things through experience at a regional dispute settlement body, I focus on the information acquired associated with the elements inherent in a state's forum shopping calculation, which would influence the state's future choice of forum in international trade disputes. The desirability of a forum is a function of the expected costs and benefits associated with resolving a trade dispute at each relevant forum.[9] The expected costs included in the forum shopping decision are tied to the litigation expenses associated with resolving the dispute at the particular forum as well as the costs stemming from the externalities associated with litigation.[10] The benefits of utilizing a particular forum are associated with the likelihood that a state achieves a ruling and/or outcome that is at, or close to, the state's ideal resolution point. These costs and benefits are tied to both the present dispute and future trade dispute resolution and trade liberalization endeavors.[11]

The specific information acquired through previous regional dispute experience provides the opportunity for a state to learn – i.e., adjust its beliefs or confidence in those beliefs – by gaining insight into the desirability of using a regional or multilateral forum to achieve a particular goal in the future. State learning is a decrease in the divergence between expected and observed costs and benefits as a state gathers information from previous experience. Learning allows a state to understand how to minimize costs of dispute resolution at the regional forum and reduce the uncertainty associated with regional dispute settlement. Uncertainty can be reduced, first, as the state uncovers information about the costs associated with engaging in the activity and how to alter its approaches to reduce costs in future endeavors, which allows it to establish or enhance the infrastructure to conduct a dispute and gather information in the future.[12]

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[9] A state selects from these alternatives in order to maximize benefits and minimize costs. See, among others, Allee and Huth (2006), Garrett and Smith (1999), and Guzman and Simmons (2005).

[10] This includes costs generated from the current measure remaining in place, ensuring compliance, the manner in which the ruling rendered in the current dispute affects the state's future endeavors, the cost of losing the dispute, and the number of veto players in place, among other things (See, among others, Mansfield, Milner, and Pevehouse 2007, 432).

[11] Busch (2007)

[12] As established in the previous chapter, existing research supports the premise that states can learn about and reduce costs through experience. Davis and Bermeo (2009) found that states learn about the costs through previous experience; they found these results while looking at the effect of participation of developing countries in disputes at the WTO Dispute Settlement Body. For in this subset of disputes, learning to use the system, as either a complainant or respondent, decreases the startup costs associated with initiating a dispute, which can increase the likelihood of initiating future disputes.

Additionally, a state has the ability to update its beliefs regarding unintended consequences associated with involvement in dispute resolution at the international organization and the likelihood of achieving the expected and/or most preferred outcome. Direct previous experience at the regional body thus provides a state with information on the real costs associated with initiating and prosecuting a dispute at a particular dispute settlement body. By identifying and analyzing an infraction of relevant international trade law, initiating and litigating a dispute associated with that infraction at a particular forum, adjusting policies based on the ruling issued, and enforcing the decision that emerges from the forum to ensure compliance with the ruling and relevant international trade law – all of which can potentially be involved with a dispute at the regional trade dispute settlement body – allows a state to gain information from experience to update its beliefs on costs and benefits of using the forum. By updating these beliefs, a state can update its dispute resolution infrastructure to minimize the costs and maximize benefits of utilizing that particular forum to resolve an international trade dispute. In so doing, states are "learning-by-doing."

In "learning-by-doing" from previous regional dispute experience, it is the states that gathers, interprets, and applies the information acquired through these experiences. Given that states can gather this information, how do they learn from it and apply this knowledge in the future? Information and knowledge is synthesized from these experiences and translated by states – which are groupings of individuals – to become policy outcomes. Since states are groups of individuals who act together, state learning involves the aggregation of individual learning.[13] As an aggregation of individual learning, collective – or state – learning can be classified as the instance in which policy experiences are translated and internalized to become part of established structures, decision-making procedures, or state commitments.[14] This ensures that learning is not tied to only one government at one point in time; the lessons learned by one government can be utilized by successive governments.

[13] Levy (1994)
[14] Levy (1994), pp. 288

In sum, through direct use, states can use these prior experiences to minimize costs of future endeavors and reduce uncertainty associated with engaging in dispute resolution at a regional forum and the likelihood of getting a particular outcome. A large difference between a state's prior and posterior beliefs on the costs and outcomes associated with use of the forum provide the opportunity for that state to learn. As a state learns it can decrease the magnitude of the divergence between the expectations and outcomes, which is then synthesized and applied to a state's infrastructure. This allows for lessons and information learned by states to be passed on to and supplemented by future administrations.

### 2.1.1 Reducing Resource Costs Through Learning and Future Forum Choice

Given that a state can learn from previous experience at the regional organization, how does this learning influence a state's future choice between these overlapping forums? By using a regional dispute settlement mechanism, states are able to learn about tangible and intangible costs associated with regional dispute resolution. This knowledge helps enhance a dispute resolution infrastructure, which can yield reduction in costs and uncertainty in future disputes initiated at that forum. As the regional alternative becomes less costly relative to the expected costs and benefits at the WTO, it becomes the more desirable alternative to use to resolve an international trade dispute. The learning that occurs from previous experience can thus increase the likelihood that a state utilizes the regional alternative in future trade disputes *instead of* the WTO dispute settlement body; this is the stumbling block effect of a regional dispute settlement body.

Through previous experience, costs can be reduced in future endeavors in part because the state has sunk costs associated with establishing a dispute resolution infrastructure in the first experience at the forum. As a result, each additional dispute will likely cost less to the states looking to resolve a trade dispute; actors that use a court repeatedly have greater information that allows them to structure their next effort and have greater capacity to do so.[15] By learning about the costs of utilizing a regional forum, a state has not only more accurate expectations of costs associated with dispute resolution but also is able to

[15] See, among other, Davis and Bermeo (2009, p. 1036), Galanter (1974, p. 98), Guzman and Simmons (2005, p. 577)

minimize those costs of resolving a dispute. The extent to which a state learns about costs of utilizing the dispute resolution body and how to minimize them is especially important for understanding forum shopping behavior because of the differences in litigation costs and the degree of uncertainty between the regional and multilateral alternatives. The litigation costs associated with a dispute at the NAFTA, as an example of regional dispute settlement bodies, are significantly less than those associated with dispute resolution at the WTO.[16] Initiation of a WTO dispute is economically and politically costly.[17] An increase in previous NAFTA disputes is expected to provide states with the information and resources to enhance the infrastructure associated with litigation at the NAFTA, thereby lowering the costs of doing so.[18] State learning at the regional body thus amplifies the existing divergences in litigation costs between the regional and multilateral alternatives. In terms of minimizing costs, learning thus makes the regional alternative more attractive to a state relative to the WTO dispute settlement body.

### 2.1.2 Reducing Uncertainty Through Learning and Future Forum Choice

When predicting forum choice in the absence of previous experience, a higher amount of regional disputes may be expected when looking solely at the cost differential for using the WTO versus the regional forum to resolve a trade dispute. However, this does not account for the uncertainty surrounding dispute resolution at either forum. While a regional alternative may be characterized by lower costs, it is also characterized by a higher level of uncertainty. Without previous experience, it is thus unclear what forum choice a state will make to resolve an international trade dispute. However, a state can learn and apply that knowledge to reduce the degree of uncertainty associated with costs and outcomes at the regional alternative through previous experience. As a result, it is important to understand, first, why uncertainty varies between the regional and WTO dispute settlement bodies, and second, how learning

[16] The cost of representation in Chapter 19 disputes at the NAFTA typically incurs a cost between $200,000 and $300,000 but can cost as much as $500,000 in multi-stage cases whereas a dispute at the WTO typically cost the states involved about one million dollars each (Anderson 2006; Davis and Shirato 2007).
[17] "Recourse to the WTO dispute settlement procedures is not for everyone, nor is it a routine action that can be undertaken lightly. It is costly and time-consuming and thus discriminates in favour of big business and countries. At the same time it has political repercussions, especially if used against a close partner." (Tussie and Delich 2005)
[18] See, among others, Davis and Bermeo (2009, p. 1026), Galanter (1974, p. 98), Guzman and Simmons (2005, p. 577).

and enhancing a state's dispute resolution infrastructure can reduce uncertainty surrounding use of a regional dispute settlement body thereby making regional dispute initiation more likely relative to the likelihood of WTO dispute initiation.

The extent of uncertainty associated with the regional and WTO dispute settlement bodies is due, in part, to the institutional rules, level of transparency, and characteristics of the adjudicatory bodies, among other things. The WTO is characterized by less uncertainty relative to regional bodies, first, because of the precedential value of these rulings and the high level of transparency at the WTO.[19] Expectations associated with disputes before the WTO are likely more accurate because a state has a reasonable expectations that previous rulings are taken into account in future relevant disputes. Regional bodies are also characterized by greater relative uncertainty based on the institutional rules.[20] This is exemplified by the appeals procedures of regional bodies relative to the WTO. While the WTO has a standing body to hear appeals, regional bodies either lack a similar appeals process or one was more recently added to the dispute resolution mechanism.[21] This influences the different levels of uncertainty because a ruling by a standing, independent body will yield more reliable expectations than those rulings issued by an ad hoc panel that, at the very least, varies by dispute and could be potentially hand-picked by the disputing states.[22] Uncertainty can also increase based on the clarity of the preferences of the potential respondent, its resources, and/or the type of decision issued by the forum, i.e., whether or not it is binding on the state parties now and in the future, among other things.

[19] The NAFTA Chapter 19 Binational Panel decisions have no formal precedential value but it is expected that they are still considered in future deliberations (Pan 1999). WTO Appellate Body Report (WT/DS 10 and WT/DS 11 at 14), October 4, 1996. See also Gantz (1999) on precedent at the WTO. See, among others, Pan (1999) on transparency at the WTO.

[20] The variations in institutional rules also inhibit the ability of a state to engage in inter-institutional learning.

[21] An appeal at NAFTA could come in the form of an Extraordinary Challenge Committee (ECC). However, this review procedure does not challenge the content of the ruling. The ECC can only overturn the decision of a binational panel under Chapter 19 of the NAFTA if a member of the binational panel is guilty of some misconduct, the panel departed from a fundamental rule of procedure, or the panel exceeded its authority or jurisdiction (Pan 1999). Appeals are possible at the Mercosur through the Permanent Review Tribunal, which was added through the Olivios Protocol in 2002. The Arbitration Tribunal inherent in the dispute resolution mechanism of the Central American Common Market, while not subject for appeal, can review non-compliance follow the expiration of the compliance deadline. There is also no appeal available in the litigious phase at the Andean Community.

[22] At the NAFTA, for example, there are five panelists that are selected from a list of seventy-five potential panelists. The two countries involved in the dispute each select two panelists and the two countries jointly select the fifth (Pan 1999). This is an ideal type of highly legalized trade dispute settlement body. There are a number of things that can reduce the independence and legitimacy of such a trade institutions (see, for example, Barnett and Finnemore 1999; Esty 2002).

The manner in which non-compliance can be challenged at the WTO relative to the regional alternative also demonstrates why uncertainty is greater at the regional forums and how that relates to forum choice. In disputes at NAFTA, for example, a challenge of compliance occurs when a state contests the other's new policy, known as the Redetermination on Remand.[23] The panel is then asked to make a ruling on a presumably new policy that has been enacted to replace the one that it had previously ruled to be inconsistent with NAFTA rules and laws. Similarly, for disputes at the WTO the complainant must challenge the respondent's activities, or lack thereof, in bringing the inconsistent policy into alignment with the rules and regulations of the institution. However, at the WTO a challenge to a state's compliance with a decision would come from the complainants in the form of an Article 21.5 Panel, which is also known as the compliance panel, and/or a request for suspension of concessions (i.e., punishment for non-compliance).

At the NAFTA, the replacement measure is independently assessed whereas at the WTO a state's compliance with the previous ruling of the DSB Panel and Appellate Body is assessed. The two different methods, first, unveil the differences in the costs associated with non-compliance at both forums. Second, the variation in the procedures reveals different types of information for states to learn from. At the NAFTA, the state learns about the relevant laws, etc. that make a policy consistent or inconsistent with the NAFTA. At the WTO, in contrast, the state learns about how a change in policy is compliant and/or non-complaint as well as the preferences of the partner state to comply with the rulings of this body. Finally, the differences in procedures can unveil the different costs associated with a partner state's failure to comply with a ruling. The differences in these mechanisms for making non-compliance visible demonstrate that the institutional differences cannot only influence the degree of uncertainty associated with a state's expectations but also how prior experience may reveal different things about the procedure thereby leading to different effects on reducing the divergence between prior and posterior beliefs.

[23] This discussion applies mostly to Chapter 19 rulings, which are binding. For Chapter 20 decisions, which are non-binding, the Panel issues recommendations. This gives the complaining parties little reason to challenge the state's non-compliance because it is not bound by law to comply with the panel's assessment.

While the differences in procedure at the WTO and the regional forums introduce greater relative levels of uncertainty at the regional alternative, it also generates a greater potential for learning. With greater uncertainty the difference between expectations and outcomes associated with regional dispute resolution and the beliefs associated with these expectations, which is what contributes to learning, is likely much greater.[24] Both policy failures and successes provide insight; states learn from policy failures where expectations vary greatly from outcomes while policy successes yield continuity.[25] By assessing the differences between its prior and posterior beliefs, a state gathers information about the accuracy of its expectations and reduces uncertainty, which increases the desirability of the regional alternative. Learning-by-doing at a regional dispute settlement body makes the regional alternative the less costly and increases the dependability of a state's expectations associated with dispute resolution at the regional forum. This further contributes to its stumbling block effect.

### 2.1.3 EXPECTATIONS

As the discussion above demonstrates, while the raw costs associated with resolving a dispute at a regional body may be less than at the WTO, there may be a greater deal of unobservable costs arising from use of the regional forum relative to the WTO, given the institutional differences of the dispute settlement mechanisms of the these dispute settlement bodies.[26] Even though the cost is low, the differences in the level of uncertainty associated with costs of using a regional body and the WTO would lead to the expectation that the regional alternative is not always preferable to the WTO or the resolution of trade disputes outside of an international trade institution. With greater uncertainty, it is more likely that a member state's *ex ante* beliefs on the overall outcome of dispute resolution will vary greatly from its *ex post* beliefs;[27] the difference between these two would be where there is the potential for learning. Given that repeated use over time allows for a reduction in the costs and uncertainty associated with

[24] Jensen and Lindstadt (2012) look at how states learn based on the types of policies enacted by particular types of countries. They find that tax cuts by left governments lead to learning by other governments; these left governments are apparent policy leaders because it goes against the general policy preferences of these types of governments.
[25] Levy (1994, 304); Meseguer (2005); Wiegand and Powell (2011).
[26] See, among others, Pan (1999) for the NAFTA.
[27] Cho (2001)

outcomes at regional and multilateral dispute resolution bodies, previous experience can lead toward a higher likelihood that regional dispute settlement bodies are utilized in the future as a state becomes more confident in its expectations regarding the outcomes at the less-costly dispute resolution alternative.

Direct previous use provides states with the opportunity to adapt its dispute resolution infrastructure to minimize costs and update its beliefs to make more confident and accurate predictions on outcomes in the future. The definition of learning above emphasizes that the end result of learning is a reduction of uncertainty about the world and an increase in the state's ability to achieve its goals. As such, I expect that learning should produce a convergence in outcomes toward a cost effective dispute resolution forum. I expect that, through an increase in previous regional dispute experience, states are able to learn about costs, how to minimize them, and reduce uncertainty in such a way that they adjust beliefs and goals to make the regional dispute settlement body the more desirable forum choice alternative for future disputes.

**Hypothesis 1: An increase in the amount of regional dispute settlement experience is associated with an increase in the likelihood of utilizing a regional dispute settlement body in the future.**

## 2.2 Explaining Variation in State Learning From Previous Experience

As discussed in the previous chapter, existing research has argued that learning is not a consistent phenomenon; if learning was the same across time, space, and actors it would be epiphenomenal.[28] As such, I expect that the effect of previous experience on future forum choice will vary based on the different capacities of actors to learn. The variation in learning provides insight into the differential effects of previous experience on a state's decision to utilize a regional body instead of the WTO dispute settlement body in the future, i.e., the regional dispute settlement body's stumbling block effect. To summarize from the previous chapter, there are three key sets of existing explanations to understand variation in learning: the differences between expectations and outcomes; capacity constraints; and the importance of the lesson determined by situational attributes and the entrenchment of prior beliefs. These

[28] Levy (1994); Knopf (2003, 193).

existing explanations can be synthesized into a single understanding of why state learning varies: learning capacity.

Learning capacity is defined as the potential for learning as determined by the divergence between expectations and outcomes, i.e., the deviation between state's *ex post* and *ex ante* beliefs about the costs and benefits of using each of the relevant forum choice alternatives to resolve an international trade dispute. A state's learning capacity increases as these two sets of beliefs vary more greatly from each other; the large gap between expectations and outcomes generates the learning space.[29] When a state expects a certain outcome and receives that outcome, it learns very little.[30] There is thus variation in the potential capacity of an actor to learn.[31] It is learning capacity that I expect to explain the variation in the effect of previous regional dispute experience on the likelihood of initiating a regional dispute *instead of* a multilateral dispute in the future. Given that learning capacity influences the extent of learning and thus its effect on future state behavior, what influences a state's learning capacity?

Learning capacity is theorized to be composed of two parts: the ability and incentive to learn. The ability component of learning capacity captures the resource constraints faced by a state. This component of learning capacity is tied to the state's legal, economic, and political resources, which contributes to the sophistication of the state's initial dispute resolution infrastructure before gaining any experience at a regional forum and, as a result, the accuracy of its original expectations. The incentive component of learning capacity captures the context under which information is gathered and the perceived importance applied to it.[32] Both the ability and incentives of a state are associated with learning capacity because they generate and contribute to the size of the learning space. The two elements of learning capacity are expected to condition the effect of previous regional dispute experience on the likelihood that a regional dispute is initiated in the future, relative to the likelihood that a WTO dispute is initiated.

[29] See, among others, Cho (2001), Jensen and Lindsatadt (2012), Levy (1994, 304), Wiegand and Powell (2011).
[30] Levy (1994)
[31] Stone (1999, p. 56)
[32] Dai (2002) notes the importance of incentives in monitoring arrangements.

### 2.2.1 CONDITIONING EFFECT OF THE ABILITY TO LEARN ON FUTURE FORUM CHOICE

The ability component of learning capacity is determined by the economic, political, and legal resources available to the state, which is determined in part by the state's level of development. With a greater amount of resources at the outset, a state can establish a dispute resolution infrastructure that produces better expectations, which decreases uncertainty surrounding outcomes at a regional body, and reduces costs of litigation and dispute resolution. With decreased uncertainty, the divergence between expectations and outcomes – i.e., the learning capacity – decreases. This demonstrates that development status is inversely associated with learning capacity; it can influence the baseline resources and capabilities of a state to develop initial expectations and beliefs that are more accurate as well as influence the ability of a state to learn.[33] It is the state that needs to enhance its dispute resolution infrastructure that derives the greater benefit from previous regional dispute experience. I expect that developing countries will be characterized by greater learning capacity, which will allow them a greater potential to learn from each experience. As a result, the marginal effects of regional dispute experience on future regional dispute initiation will be greater for developing countries relative to developed ones.

Existing research has outlined the disadvantages faced by developing countries, relative to developed ones, at these trade dispute settlement forums.[34] Learning from prior experiences provides developing countries a way to overcome these capacity constraints. The extent of the influence of learning capacity may also vary based on the forum where states had the previous experience. I expect that the learning capacity is greater at regional forums than at the WTO. A state can increase the accuracy of its expectations on costs and outcomes, and improve the quality of its dispute resolution infrastructure, through the Advisory Centre of the WTO. A similar mechanism is generally absent from regional bodies. While the rules and characteristics of the institution may determine the level of uncertainty that states face

[33] For example, Meagher (2007) argues that developing countries are less likely to have the infrastructure to alleviate the costs associated with disputes at the WTO and are at a disadvantage at the WTO because, since they have fewer resources at the starting point and the costs of acquiring these resources are greater for developing countries than developed ones at the WTO.
[34] See, among others, Bown (2004a), Bown and Hoekman (2005, 2007, 2008), Busch and Reinhardt (2007, 2009), Davis and Bermeo (2009), Guzman and Simmons (2005), Hoekman, Horn, and Mavroidis (2008), Horn, Mavroidis, and Nordström (1999), Meagher (2007), Pierola and Horlick (2007).

when constructing their prior beliefs, the institutional characteristics can also help a state with diminished learning capacity to improve the accuracy of its posterior beliefs, especially if they vary greatly from the prior beliefs. In sum, while learning capacity decreases as the level of development increases, it is relatively greater at the regional alternative.

### 2.2.2 Conditioning Effect of the Incentive to Learn on Future Forum Choice

While the capacity constraints faced by a state can influence a state's ability to learn, it is not the only element that influences learning capacity. The second component of learning capacity is the incentive to learn. The incentive to learn is determined by the dyadic economic relationship between the two disputing parties, which can determine the lens through which states view, interpret, analyze, and apply the information gathered through experiences in the dispute settlement mechanisms in the past.[35] Further, the depth of the relationship between the actors can influence the flow and absorption of the knowledge and lessons derived from prior experiences and activities.[36] For each dyad, the lens is different and, as a result, learning is likely to vary based on the nature and specifics of these relationships. By setting the context, these relationships can shape the size of the learning space by potentially setting a focal point and/or the quality of the signal, i.e., the information provided through previous experience.[37] The incentive also varies because the source of the information can influence its credibility and/or importance.[38] These relationships change the value of the information gathered during prior regional experiences, the perceived costs of learning and failure to resolve the dispute, and the likelihood and costs of potential future disputes. The dyadic economic relationship is thus expected to determine the extent to which the divergence between expectations and outcomes matters to the learning state.

[35] Levy (1994)
[36] Inkpen (1998)
[37] This type of argument is in line with the cascade model discussed in Jensen and Lindstadt (2011). In these cascade models, information tends to be inefficient; international organizations increase the efficiency of this information by reducing the noise surrounding it.
[38] See, among others, Jensen and Lindstadt (2011), Johnston (2001, p. 491), Kuklinski and Hurly (1996, p. 127), Halpern (1997), Valley, Moag, and Bazerman (1998, p. 230)

While the ability component of learning capacity influences the size of the learning space – i.e., the divergence between expectations and outcomes and confidence in the beliefs associated with expectations – the incentive component influences the perceived value of minimizing that divergence. The marginal effect of previous regional dispute experience will thus increase as this perceived value increases. I expect two elements of the dyadic economic relationship capture the perceived value of generating the most accurate expectations on costs and outcomes of dispute resolution at regional and multilateral forums: the trade relationship between these two states and the economic power disparities. First, the dyadic trade relationship influences learning by shaping preferences on having the most accurate expectations. A stronger dyadic trade relationship increases the influence previous regional experience due to both the expected likelihood of facing trade disputes with this partner in the future and the overall economic costs of trade disruption and/or resolution efforts. This premise is based on the relationship between the dyadic trade relationship and the likelihood of dispute initiation.[39] An increased likelihood of future disputes influences the perceived value of a particular dispute when considering the precedent it can set.[40] The marginal effect of previous regional dispute experience on the stumbling block effect of regional dispute settlement bodies should thus increase as a potential complainant becomes more dependent on trade with another member of the regional arrangement.

The economic power disparities in the dyad are also expected to influence the learning that occurs from previous regional dispute experience because these power factors can influence compliance and retaliatory concerns.[41] When the potential complainant is the less powerful member of the dyad and/or there are relative economic power parities, a state will have difficulty wielding its influence to get the outcome it desires both inside and outside the available dispute resolution mechanisms. Further, the relative power disparities influence the extent of the potential compliance costs. As such, a state wants to ensure that it has accurate expectations about its partner's intention to comply before spending the

[39] See, among others, Gomez-Mera and Molinari (2013).
[40] Busch (2007)
[41] Magnus (2005)

resources litigating and resolving a dispute; if the more powerful partner has very little intention to comply, doing so would result in resources spent without attaining the desired outcome.

Power disparities introduce preferences for selectivity in trade dispute resolution to ensure that resources are not wasted and that a state does not face retaliatory costs from its partner as a result of such endeavors. The more powerful the partner state is relative to the state engaging in the learning process, the more significant the experience will be in updating its beliefs and reducing uncertainty about the world. The incentive to learn – i.e., the preference to minimize the divergence between expectation and outcomes – is inversely related to the economic power disparities; a state's incentive to learn decreases as it becomes relatively more powerful in a dyad. This implies that the marginal effects of previous regional dispute experience on the likelihood of future regional dispute initiation will decrease as a state's relative economic power in a dyad increases.

### 2.2.3 EXPECTATIONS

Similar to students in a classroom, I expect that certain characteristics of a state will influence the extent to which it can learn. As described above, the variation in the learning that occurs from previous regional dispute experience and its resulting effect on future forum shopping endeavors is a function of a state's learning capacity. Learning capacity is determined, in part, by the legal, economic, and/or political resources available to a state to develop a high-level dispute resolution infrastructure to generate more accurate expectations and have greater confidence in those expectations, i.e., the ability to learn. The characteristics of the dyadic economic relationship also shape the incentive component of learning capacity; this relationship influences the perceived importance of the dispute, minimizing the divergence between prior and posterior beliefs, and enhancing the confidence in those beliefs. Based on the discussion above, a state's learning capacity increases under a number of conditions. First, it will increase as the state's level of development decreases; developing countries are expected to have a greater learning capacity since this group of states faces capacity constraints that limit the quality of the dispute resolution infrastructure.

Second, learning capacity increases as a state becomes more dependent on trade with a particular potential future trade dispute party. This is based on the relative costs of litigation, precedent setting considerations, potential disruptions in trade, and potential future trade disputes, among other things. Finally, the economic power disparities of a dyad are inversely related to learning capacity; as a state's relative economic power decreases, the preference to generate more accurate and confident expectations increases given costs associated with difficulties achieving compliance and/or retaliation by the more powerful party. Despite the specific relationship between the components of learning capacity and future forum choice, learning capacity is expected to condition the effect of previous regional dispute experience. Specifically, the marginal effects of previous regional dispute experience on the likelihood of initiating a regional dispute in the future are expected to increase as a state's learning capacity increases.

**Hypothesis 2: The positive effect of an increase in that state's regional dispute experience on the likelihood of future regional dispute initiation will increase as a potential complainant's learning capacity increases.**

## 2.3 Diminishing Returns of Previous Regional Dispute Experience

Through repeated use of an institution, a state can enhance its dispute resolution infrastructure. In so doing, it can increase its ability to form more accurate expectations, have confidence in those expectations, and minimize costs associated with dispute resolution endeavors in future endeavors at that forum.[42] However, with each subsequent dispute, the extent to which a state may improve expectations and minimize costs will decrease. Further, states have limited resources to pursue international trade dispute resolution. Each subsequent dispute in a given year limits the resources available to pursue another dispute in that same year or the future. As a result, I expect there will be diminishing marginal returns for each additional dispute on the likelihood of using the regional body instead of the WTO dispute settlement body once a certain threshold has been reached.

While the effect of regional dispute experience on the likelihood of initiating a regional dispute relative to the likelihood of initiating a multilateral dispute should remain positive across all levels of

[42] Davis and Bermeo (2009, p. 1036), Galantar (1974, p. 98), Guzman and Simmons (2005, p. 577),

prior experience, based on the discussion above, I expect that the magnitude of this effect will exhibit a non-linear effect. Resource constraints will limit the observed effect because, above a certain point, a state will need to be more selective in the dispute that it initiates. A state that already has initiated a large number of disputes in a given year may only be able to initiate an additional one if it expects that the costs of doing so will not be burdensome on the state's operating budget and/or its economic health. Additionally, a state may learn less from an additional dispute after a state has reached the threshold of increasing marginal returns for previous regional dispute experience because it has already gathered information to enhance its dispute resolution infrastructure and the accuracy of its expectations as well as the understanding of the ways in which to minimize costs of pursuing a regional dispute. Based on these elements, I expect that an inverse-U relationship will be observed in the marginal effects of previous experience on the likelihood of initiating a regional dispute relative to a dispute at the WTO as the number of previous regional disputes increases.

**Hypothesis 3: The positive effect of an increase in the amount of a state's previous regional dispute experience on the likelihood of future regional dispute initiation will increase as a potential complainant's previous experience increases up until a certain point and then the effect will begin to decrease.**

## 2.4 Alternative Explanations for the Relationship between Previous Experience and Forum Choice

To explain the relationship between patterns of use of regional dispute settlement bodies and future use of regional and multilateral dispute resolution alternatives, I have posited that states learn from these experiences and apply that knowledge in future decision-making endeavors when attempting to resolve a trade dispute. This argument has focused on the ability of states to gather and internalize information provided from previous experiences to update and enhance its dispute resolution infrastructure to reduce the observable and unobservable costs as well as uncertainty surrounding outcomes of future dispute resolution at a particular forum. However, to increase the confidence that this is the primary mechanism at play in the relationship between previous regional dispute experience and future regional dispute initiation, I address two key alternative mechanisms in turn. Specifically, this

relationship could potentially be explained by increasing returns associated with repeated use – i.e., path dependence is responsible for the relationship between dispute initiation experience and future dispute initiations – or it could be a function of the disparities in the costs of use of the regional and multilateral disputes resolution forums. In so doing, I address why, even if these mechanisms do play a role in explaining this relationship, the effect is extremely limited.

Aside from learning, the positive relationship between previous use and the likelihood of future regional dispute initiation could, first, be a function of inertia in the decision-making procedures of political institutions associated with trade dispute resolution. Use of regional dispute settlement bodies in the future may be a function of the decision to utilize that body in the past; the positive feedback and increasing returns associated with doing so raises the likelihood that a state will continue using the same means to resolve its international trade disputes. Specifically, path dependence may explain any positive relationship between regional dispute initiation in the past and dispute initiation in the future.[43] Given the discussion above on the influence of previous experience on reducing costs and uncertainty surrounding future regional dispute initiation, this seems potentially plausible. In this alternative mechanism, the initial likelihood of dispute initiation across the different dispute resolution alternatives is dissimilar. Since a state has increased its capacity, established a dispute resolution infrastructure, and engaged in disputes within the regional forum, the incentives to use a regional forum, instead of resolution outside of formal bodies or at the dispute resolution body of the WTO, are perceived to be greater than those associated with the alternatives.

However, path dependence is unlikely the driving force behind any positive relationship between previous regional dispute experience and future dispute initiation. I expect that this mechanism will play a limited role, relative to the learning mechanism described above, for two key reasons. First, I expect that it is learning, and not path dependence, that explains regional dispute initiation in the future because of a key limitation of the regional forums relative to the multilateral alternative: the absence of a formal

[43] For discussion of path dependence see, among others: Franzese, Hays, and Kachi (2012); Jackson and Kollman (2007); Levi (1997); Page (2006); Pierson (2000)

enforcement mechanism. History does in fact matter; any experience with non-compliance with the rulings and negotiated settlements that result from use of regional trade dispute settlement mechanisms may decrease any potential increasing returns for repeated use. Additionally, there is likely overlap in the timing of the resolution of these disputes. While disputes may be initiated sequentially, the resolution of previously initiated disputes can potentially be ongoing as future disputes are initiated. Such a non-compliance event in previous or simultaneous disputes may trigger a jump to a different path; the regional dispute alternative can become the less preferred option to resolve a dispute.

I also expect that path dependence is unlikely the driving mechanism in the relationship between previous experience and future forum choice because of the unique challenges faced by each additional dispute. Benefits derived in previous regional or multilateral disputes do not necessarily imply positive outcomes at a particular forum in the future. Consider the dispute settlement behavior of Argentina and Brazil. Prior to 2000, Brazil had initiated one hundred and three regional disputes at the Mercosur dispute resolution body. However, in 2000, Brazil initiated a WTO dispute over cotton against Argentina; this contradicts path dependence expectations since Brazil alters its dispute resolution pathway. In this dispute, resolution was reached quickly and Brazil received a favorable outcome; both the request for consultations made by Brazil and a mutually agreed solution between Brazil and Argentina occurred in 2000. Given that Brazil had some legal capacity, albeit limited, at the WTO dispute settlement body, the positive outcome at the WTO in the past would be expected to yield an expectation of increasing returns for repeated use of this institution.[44] However, Brazil neither switches paths nor retreats wholly back to its old one. Following this dispute at the WTO, Brazil initiated fifty-four regional disputes and one additional WTO dispute, which occurred in the following year.

Moves between resolution bodies should be expected given that each dispute involves a certain industry and set of citizens influenced by the discriminatory trade policy at a particular point in time. A state's interpretation of how to address and mitigate these unique challenges may be informed by previous experience but choosing a forum without recognition of these unique elements of a dispute may yield

[44] In 2002, the Brazil mission to the WTO (undedicated) had a staff of twelve (VanGrasstek 2013).

greater potential observable and unobservable costs at the domestic level. For example, previously initiating a regional dispute based on the preferences of a firm in a particular industry that provides benefits to a distinct subset of the population may be less informative on the differences in the electoral benefits or costs for initiating a regional dispute for a highly important and diffuse industry versus those associated with dispute resolution at the more visible and transparent WTO. In fact, a state can potentially garner larger electoral benefits by defying inertia and selecting the multilateral alternative. As a result, there are not necessarily increasing returns associated with initiation of one particular dispute simply because one has been initiated in the past. Further, future use of a body may in fact generate decreasing returns for continuing on the same path in forum choices for international trade dispute resolution. Consider a dispute between Honduras and Nicaragua over imports from Honduras before the WTO in 2000 (WT/DS 201). Following ideas inherent in the path dependence explanation, such behavior would be expected to increase the benefits of future WTO dispute initiation. However, we do not observe future initiation by Honduras of disputes at any forum. This may have resulted from inefficiencies in the organization that led to the conclusion that there were not increasing benefits of using the same forum; this dispute, while initiated in 2000, remains inactive in the consultations phase. When use of a forum produces an unpopular result and/or fails to resolve the dispute, future use of the same forum may be perceived by relevant actors in a negative light, which generates audience costs that are exacerbated by similar results from recurrent use. As a result, use of a particular forum is not necessarily predetermined or constrained.

While it is important to address path dependence as an alternative mechanism for explaining a positive relationship between previous regional dispute experience and future regional dispute initiation, it is not the only alternative mechanism. In addition, the positive relationship between previous regional dispute experience and future regional dispute initiation could be a function of the differences in the costs associated with regional dispute settlement bodies relative to the WTO dispute settlement body. This mechanism is potentially related to the previous alternative explanation; disparities in costs and increasing capacity constraints associated with previous experience may also provide the appearance of path

dependence. A regional dispute body is associated with fewer observable resource costs and previous use helps to minimize and reduce these costs. As a result, there are apparent increasing returns for use of the regional body when looking simply at resource costs associated with dispute resolution. However, tying regional forum use to the disparities in costs in the formal mechanisms fails to account for a key limitation in the regional body and other less costly non-formal alternatives to dispute resolution: uncertainty.

Recall from the discussion above that there are large disparities in the litigation costs associated with regional dispute resolution, as exemplified by the NAFTA body relative to the WTO body.[45] Yet, the disparities in costs are tied to the observable litigation costs. In contrast, regional bodies are characterized by a higher level of uncertainty, which increases the potential unobservable costs associated with resolving an international trade dispute.[46] This is due in part to differences in the transparency of the bodies and the institutional rules, including the ability to appeal and precedential value of decisions issued. The disparities associated with the uncertainty surrounding costs and outcomes of dispute resolution at the regional forum counterbalance the asymmetric litigation costs between regional and WTO dispute settlement bodies.

Further, the regional bodies are only a less costly *formal* alternative. States also have, at their disposal, the ability to resolve disputes outside of the purview of the any international dispute settlement mechanisms. These approaches do not face the same litigation and audience costs associated with formal dispute resolution at the regional or multilateral bodies. Previous experience at a regional body – if it increases a state's litigation capacity, as argued above and elsewhere – would thus provide a state with the infrastructure necessary to pursue dispute resolution independently. In so doing, it would be taking the overall least costly alternative in resolving an international trade dispute. While cost differences may

[45] The cost of representation in Chapter 19 disputes at the NAFTA typically incurs a cost between $200,000 and $300,000 but can cost as much as $500,000 in multi-stage cases whereas a dispute at the WTO typically cost the states involved about one million dollars each (Anderson 2006; Davis and Shirato 2007). The initiation of a WTO dispute is also economically and politically costly. "Recourse to the WTO dispute settlement procedures is not for everyone, nor is it a routine action that can be undertaken lightly. It is costly and time-consuming and thus discriminates in favour of big business and countries. At the same time it has political repercussions, especially if used against a close partner." (Tussie and Delich 2005)

[46] Refer to discussion in section 2.2.2.

influence both initial and subsequent decisions, they are insufficient in explaining repeated of a regional dispute settlement body given that the regional alternative is not necessarily the least costly alternative to resolve an international trade dispute; high levels of uncertainty can exacerbate the unobservable costs of regional forums and dyads may have the ability to utilize non-formal alternatives that can minimize or eliminate many of the observable costs. A cost-based explanation would thus generate the expectation that regional dispute initiation should be less, not more likely, given that a less costly alternative exists outside of formal international organizations.

In presenting these alternative mechanisms, I have demonstrated reasons why I believe they are not the driving force behind the expected positive relationship between previous regional dispute experience and future regional dispute initiation. However, these alternative mechanisms may be interrelated with my main mechanism: learning-by-doing. Given the potential confounding effect of these alternative mechanisms, I empirically account for them in my analyses in the following chapters. These analyses demonstrate that these mechanisms likely play a limited role in the relationship and magnitude of the effect of previous regional dispute experience on the likelihood of future regional dispute initiation.

## 2.5 CONCLUSION

Why do states utilize regional dispute settlement bodies when a multilateral alternative exists at the WTO? In this chapter, I have presented an argument to explain why a state selects a regional body instead of the multilateral alternative available at the WTO. Through experience, a state can gain awareness of the costs, procedures, and how legal documents are interpreted by the relevant bodies, learn from this information, and enhance its dispute resolution infrastructure. Learning from this previous experience allows a state to minimize costs and reduce uncertainty associated with the outcomes of utilizing a regional forum. A regional dispute settlement body thus becomes more desirable to a state as its previous experience at that regional body increases. However, the ability to learn from these experiences varies. A state's learning capacity influences the extent of learning and, as a result, the effect of previous regional dispute experience on the likelihood of initiating a regional dispute in the future,

relative to the likelihood of initiating a dispute at the WTO. The learning-by-doing mechanism used to explain forum choice demonstrates the stumbling block effect of regional dispute settlement bodies.

While learning is considered to be rational in the discussion above, these arguments are also consistent with these alternative conceptualizations of learning that argue that actors evaluate the information that they come upon differently based on pre-established understandings of the world and other heuristics.[47] My assessment that my argument addresses these cognitive models is based on the assumption that the realm of policy alternatives for the resolution of trade disputes is already pre-established and fixed. In the case of the resolution of trade disputes, there are four natural policy alternatives that are considered above: no dispute resolution, regional dispute resolution, multilateral dispute resolution, and dispute resolution at both forums. These will not vary; as a result, this argument does not speak to the cognitive models of learning that discuss how learning may limit the policy alternatives available to states.

In the following chapters, I empirically evaluate the expectations laid out above. In the next chapter, I introduce the original data set collected to empirically test the argument and hypotheses presented above. This data set provides the first set of data on dispute settlement, previous experience, and decisions issued in disputes at selected regional bodies and the WTO. Chapter 4 presents the first empirical test of my expectations. I examine the influence of dispute initiation in the past on dispute initiation in the future. This chapter looks at the overall effect of previous experience. In Chapter 5, I examine the dispute resolution process in depth to see the effect on forum choice. Overall dispute initiation includes both dyadic consultations and institutional contribution towards dispute resolution. In this final empirical chapter, I focus on the effect of decisions issued at the dispute settlement body. This chapter provides confidence that it is the specific experience in the regional dispute settlement body itself and not just interactions and negotiations within this forum that generates the stumbling block effect of regional dispute settlement bodies

[47] This strain of research on learning emphasizes that actors are not rational learners; they take cognitive short-cuts to cull information, update beliefs on the situation, and make policy choices through various decision-making procedures. See, among others, Allison (1969), Fearon and Wendt (2002), Holsti (1962), Jervis (1976) , Levy (1994)

## 3.0 WHERE DO STATES RESOLVE DISPUTES? THE FORUM SHOPPING DATA SET

What explains state behavior when resolving trade disputes? The previous chapters have presented a theory of learning in international trade dispute settlement bodies that provides insight into this question. I have argued that a state learns from experience; learning-by-doing provides a state with information about resolving disputes that may have otherwise been unavailable or insufficient. This learning mechanism is posited to be useful to explain one key element of state behavior in international trade disputes: why a state chooses to utilize a regional dispute settlement body when an extensive and well-developed one exists at the World Trade Organization (WTO). The theory presented in the previous chapter demonstrates that utilizing a regional dispute settlement body in a previous dispute allows states to learn about the specifics of resolving a trade dispute, which allow the state to be more accurate in its expectations of the costs and benefits associated with that form of dispute resolution. This theoretical explanation also focused on the role played by the differences in learning capabilities. The ability to learn-by-doing, and apply the lessons learned in the future, is expected to be a function of learning capacity. Based on the theory presented in previous chapters, I expect that regional trade dispute settlement bodies behave as a stumbling block toward multilateral dispute resolution; previous regional experience will lead to further use of that body. Specifically, I expect to observe a positive relationship between the amount of previous regional dispute experience and the likelihood of future regional dispute initiation, relative to the likelihood of utilizing the WTO body, but that the magnitude of this effect will vary based on learning capacity of the potential complainant state.

**Table 3.1: Hypotheses**

| | |
|---|---|
| *Hypothesis 1:* An increase in the amount of regional dispute settlement experience is associated with an increase in the likelihood of utilizing a regional dispute settlement body in the future. | $\beta > 0$ |
| *Hypothesis 2:* The positive effect of an increase in that state's regional dispute experience on the likelihood of future regional dispute initiation will increase as a potential complainant's learning capacity increases. | $\beta > 0$ |

| | |
|---|---|
| *Hypothesis 3:* The positive effect of an increase in the amount of a state's previous regional dispute experience on the likelihood of future regional dispute initiation will increase as a potential complainant's previous experience increases up until a certain point and then the effect will begin to decrease. | $\beta > 0$ |

While the previous chapters have established the foundations of the effect of learning through previous experience on future forum choice – and thus the stumbling block effect of regional trade dispute settlement bodies – the next three chapters provide the empirical data and analyses that test these expectations. This chapter introduces, in detail, the original data set of previous experience and forum choice in international trade disputes collected for this project. Chapters four and five utilize this data set to test the hypotheses derived in chapter two, which are found in table 3.1. Each chapter tests the hypotheses using different conceptualizations of previous regional experience to best assess the stumbling block role of regional dispute settlement bodies. The first of these chapters focuses on the overall effect of previous experience by looking at the effect of regional dispute initiation. It empirically examines the question of how previous dispute initiation against a state influences the state's decision to initiate a regional dispute, relative to a multilateral one. Chapter five examines the nuanced relationship between previous experience and forum choice by focusing on the effect of the decisions issued by the dispute settlement bodies. This chapter assesses the overall effect of having a decision issued in these previous regional disputes on the likelihood of going regional instead of multilaterally to resolve disputes as well as the dissimilarities observed in the effects when examining the differences in the type of ruling. This chapter provides the first step to the answer to the question of why states go regional to resolve trade disputes when a multilateral alternative exists.

## 3.1 IMPORTANCE OF DATA SET

This data set allows for the first empirical test of the forum shopping decision in international trade disputes, the stumbling or building block role of regional trade dispute settlement bodies, and the effect of learning on these forum choices. In terms of understanding the effect of learning, the

information contained in this data set allows for a nuanced understanding of the role of previous experience to get at when states learn the most. Specifically, this data set captures different facets of a state's experiences at a regional or global dispute settlement body – including whether the body is used at all, whether a ruling is issued, and the characteristics of that ruling. This data set improves upon previous efforts to understand the effect of regional dispute settlement bodies on multilateral trade dispute resolution, why states initiate regionally, and what influences the choice between forums. It also adds nuance to existing studies on the initiation of disputes at the WTO, characteristics that hinder the ability to initiate disputes, and learning in international institutions.

I have collected data and structured my original data set to not only to provide insight into the choice *between* these forums, instead of the choice of each body individually, but also to provide the opportunity to empirically examine the factors that influence forum choice across regional trade agreements (RTAs) and different groups of countries. Existing research has failed to provide good understanding of these relationships both spatially and temporally. Literature in the first strain , which has provided explanations for forum choice, has not tested these expectations on a large-N panel dataset.[1] A similarly large gap exists in literature that looks at the choice of each particular forum; this research fails to account for the simultaneous decision to not initiate regionally or at the WTO when a state initiates a trade dispute at the alternative forum.

The data I have collected provide a multi-faceted contribution and fills these gaps in four key ways. First, my data set expands the coverage of data on regional disputes across RTAs. I have gathered data on the choice between a regional forum and the WTO for the member states of the Andean Community (CAN), Central American Common Market (CACM), Common Market of the South (MERCOSUR), and North American Free Trade Agreement (NAFTA). Second, my data set expands the study of forum choice beyond case study analysis. I capture previous use of each forum and the choice to

[1] See Busch (2007), Davis (2005, 2009), Gantz (1999), and Gomez-Mera and Molinari (2013), among others. Busch (2007) does support his hypothesis through use of a spatial model and two case studies. Gomez-Mera and Molinari (2013) frame their argument as a forum shopping argument but the tests conducted focus on the choice of a regional body without accounting for the simultaneous choice to *not* file at the WTO.

initiate a forum at a regional body, the WTO or at both forums between 1995 and 2010. Third, the data I have collected allow me to further uncover the role of learning from a state's previous experience in a dispute at a RTA on the likelihood of initiating a regional dispute in the future relative to the likelihood of initiating at the WTO. This will allow me to assess the stumbling or building block role of regional dispute settlement bodies. The most significant contribution of this data is derived from the opportunity it provides to test the choice *between* the dispute settlement bodies at a regional trade agreement and the WTO. This allows me to accurately capture the decision-making that occurs in dispute initiation to accurately understand what influence the decision to initiate a trade dispute and the decision on where to initiate that dispute.

## 3.2 THE FORUM SHOPPING DATA SET

To understand the specifics of the dependent and independent variables of this data set, it is first important to understand the structure of the data set. In terms of the coverage, I capture data on regional and global disputes and forum choice for the member states of four regional trade agreements. These regional agreements are limited to the western hemisphere. As mentioned above, I gather data for the member states of the Andean Community (CAN), Central American Common Market (CACM), Common Market of the South (MERCOSUR), North American Free Trade Agreement (NAFTA). I have collected data on forum choice and dispute experience for the member states of these arrangements before the regional dispute settlement body and the dispute settlement bodies of the World Trade Organization.

These regional trade agreements are selected to analyze the stumbling block role of regional trade dispute settlement bodies and what influences forum shopping based on a number of criteria. The first criterion for inclusion in the data set is that the state be a member of a regional trade agreement within the Western hemisphere. The next criterion for selection is that the regional trade agreement has an active dispute settlement mechanism. This restriction ensures that the member states have a real choice between two effective forums to resolve their dispute. If the regional trade agreement does not have a functioning dispute settlement mechanism, I essentially will be explaining whether or not the WTO member state in

question initiates a dispute at the WTO, not why it selects one forum instead of another. This final criterion also establishes the temporal range of the data. I only include data when the WTO dispute settlement body is available for use by the member states of the regional agreements; I thus examine the forum choice for disputes initiated between 1995 and 2010.[2]

The characteristics and patterns of use of the regional dispute settlement bodies included in the analysis help enhance the understanding of the stumbling block effect of the dispute settlement bodies inherent in these organizations. The regional arrangements analyzed exhibit diversity in terms of timing of the establishment, level of legalism, and extent of development through renegotiation of the dispute settlement mechanism for the regional bloc as well as the patterns of use to resolve disputes. Across organizations, these regional dispute settlement bodies originated as components of larger trade liberalization endeavors. Specifically, these bodies came into existence in the following ways. First, the current manifestation of the dispute resolution body of the Central American Common Market emerged through an amendment to article 35 of the Tegucigalpa Protocol to the Charter of the Organization of Central American States in 2002,[3] which was later authorized in resolution 106-2003 by the Council of Ministers for Economic Integration (COMIECO). Second, the Cartagena Agreement, which was signed in 1969, and its associated protocols and instruments established the jurisdiction and procedure for dispute settlement in the Andean Community. Third, the dispute settlement mechanism of Mercosur emerged in 1991 through the Treaty of Asunción, which aimed to establish a common market among the signing states. Finally, the dispute settlement mechanism of the NAFTA was adapted from the body included in the US-Canada Free Trade Agreement to accompany the extension of the trade liberalization effort to include Mexico in 1994.[4]

There are two facets consistent across these institutions: ability to conduct direct negotiations within the organization and availability of a body to rule on the dispute if the states fail to resolve the

[2] I limit analysis only to WTO era because of the key differences between the dispute settlement mechanism of the GATT and the WTO (See, among others, Bown 2002; Busch 2000; Busch and Reinhardt 2002, 2003; Hudec 1993; Mavroidis and Palmetter 2004; Reinhardt 2001). These differences lead me to consider multilateral dispute resolution under the GATT as distinct from dispute resolution under the WTO.

[3] The original form of the Protocol of Tegucigalpa was signed in 1992 (Leathley 2007).

[4] See, among others, Biukovic (2008), Leathley (2007), Pan (1999), and < http://idatd.eclac.cl/controversias/index_en.jsp>.

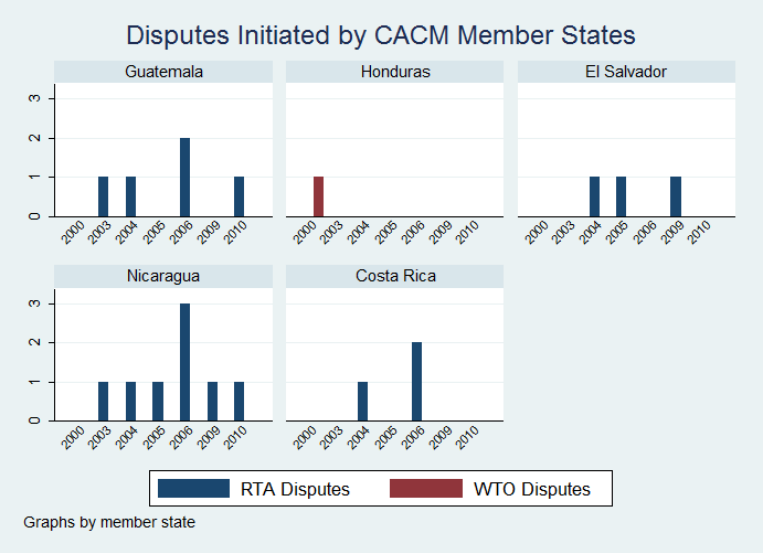
dispute via direct negotiations. The existing level of legalism inherent in each of these stages may, however, greatly vary. In the NAFTA, for example, there is am extremely limited mechanism for review of panel decisions at the NAFTA through the Extraordinary Challenge Committee (ECC), which was not conceived to be a true appellate body.[5] Yet, the initial form of the regional body is not fixed; over time, each of these regional bodies has developed in terms of level of legalism and procedure. For example, in terms of procedure at the CACM and Mercosur, renegotiation and revision to the dispute settlement mechanism resulted in a clause that removes the possibility of competing jurisdictions between the regional and multilateral forums. Additionally, these dispute resolution mechanisms has developed, adapted, and, in many cases, increased the level of legalism over time. The Mercosur dispute settlement system, for example, has evolved from the Treaty of Asunción, which established the body, via the Brasilia and Olivios Protocols, to move beyond a forum for direct negotiations to include an ad hoc arbitration tribunal and a permanent review tribunal to review and adjudicate disputes between member states.[6] Additionally, the introduction of the Permanent Review Tribunal (PRT) in the Olivios Protocol provided a mechanism for appeal of the rulings issued by the ad hoc tribunal or PRT.

These regional bodies included in the data have distinct sets of states that hold full membership; there is thus no overlap in full membership across these regional dispute settlement bodies.[7] Within these organizations, there is use by each of the member states of the organizations. Given that nearly all member states of these regional bodies initiate a dispute at the regional body, the observed patterns of use demonstrate that there are not systematic limitations to use of regional bodies that are similar to those ascribed to the WTO dispute settlement body for use by developing countries. While there is breadth in the use of the regional dispute settlement bodies, the patterns of use vary across the full member states of

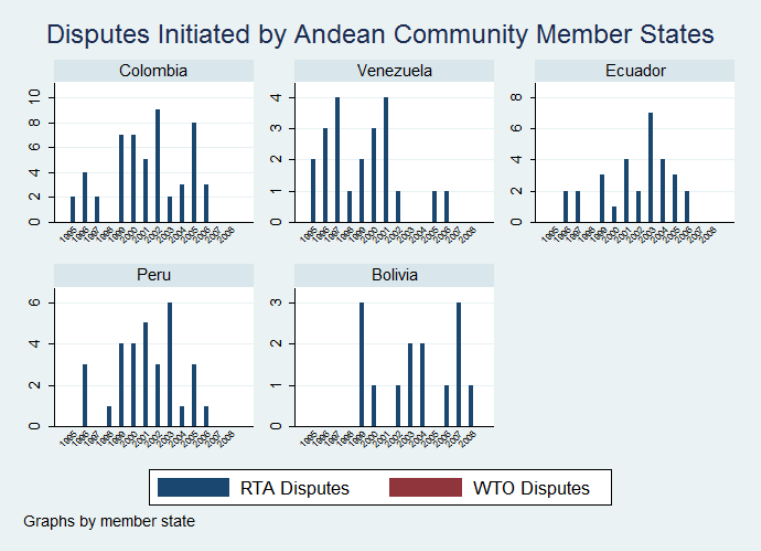
[5] Biukovic (2008) and Pan (1999)
[6] For an overview of the facets of the dispute settlement bodies see, among others, Biukovic (2008) and < http://idatd.eclac.cl/controversias/index_en.jsp>.
[7] There is some overlap when considering associate and full membership in these regional bodies. Associate members are not considered for two reasons. First, these groups of states receive some degree of tariff reductions along the lines of those observed in free trade agreements; as a result, associate members do not face the same obligations or rights as full members. Second, these groups are not recorded as engaging in trade disputes at the relevant forums. The full member states of the CAN across most of the years in the data set are: Bolivia, Colombia, Ecuador, Peru, and Venezuela. The full member states of the CACM are: Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua. The full member states of the Mercosur are: Argentina, Brazil, Paraguay, Uruguay. Venezuela became a full member of Mercosur in 2012, after formally leaving the Andean Community in 2006 The full member states of the NAFTA are: Canada, Mexico, and the United States.

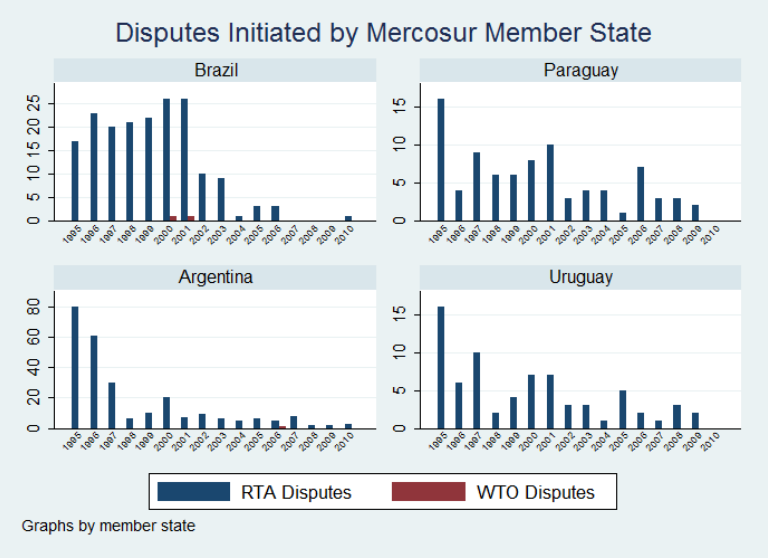
each organization, as reflected in figure 3.1. Across the panels in this figure, it is clear that while certain member states may initiate a greater number of disputes, the dispute settlement bodies are not dominated by a subset of member states. The patterns of initiation also provide insight into how the member states use the regional dispute settlement bodies, i.e., which facet of these institutions are used to resolve disputes. For example, while states like Argentina and Brazil are frequent initiators of disputes at the Mercosur dispute settlement body, decisions are much more infrequently issued in disputes against them.[8] Gaining an understanding of the purposes of dispute initiations contributes to examinations of the efficacy of international institutions.

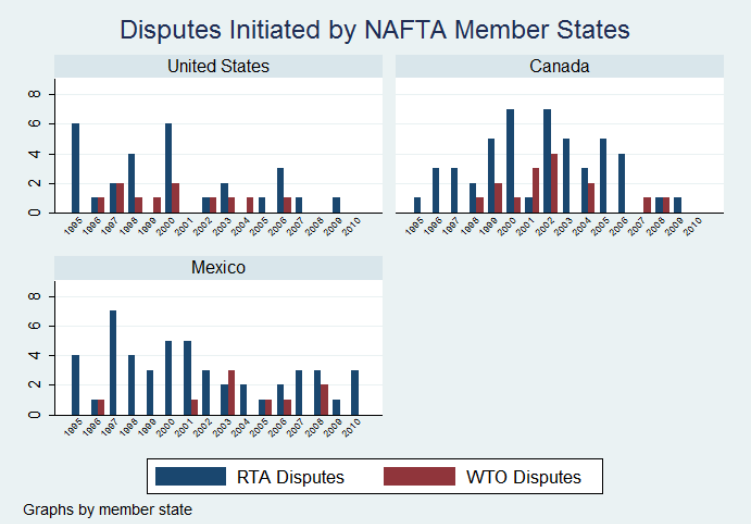
**Figure 3.1: Disputes Initiated by Member States of Regional Organizations**




[8] The maximum number of decisions issued in disputes against these two states in a particular subject area is four decisions. Across the larger dataset, the maximum number of decisions issued in disputes initiated against a particular state in a given year in a particular subject area is fourteen. When looking across subject areas, the maximum number of decisions issued in a dispute against a particular state is thirty-seven; this is observed in disputes against Ecuador in 1999. Comparatively, a greater number of decisions are issued in disputes against states in the Andean Community; the maximum number of decisions issued in other regional organizations is fourteen.

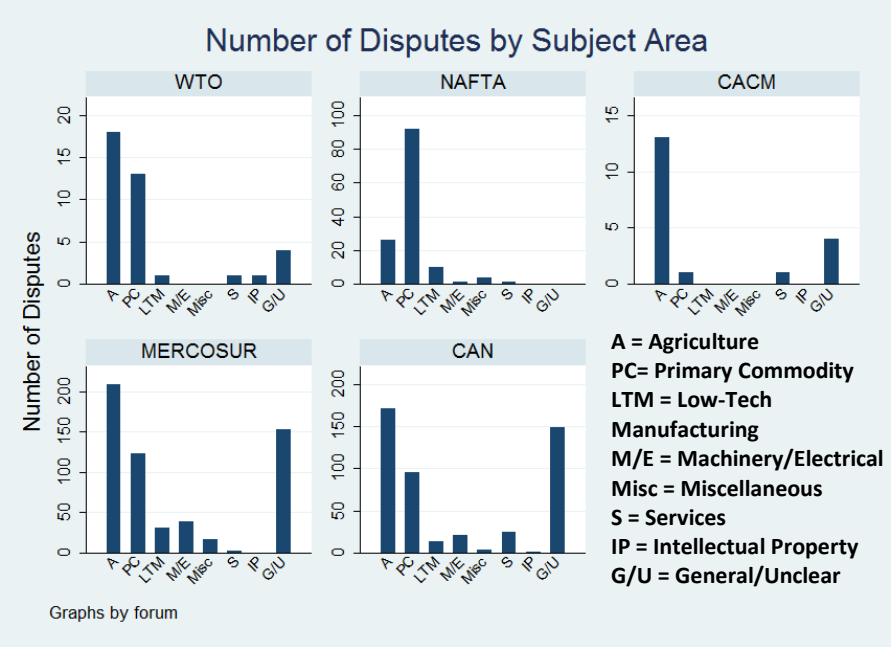

Disputes Initiated by Andean Community Member States
Colombia
Venezuela
Ecuador
Peru
Bolivia
RTA Disputes
WTO Disputes
Graphs by member state


Disputes Initiated by Mercosur Member State
Brazil
Paraguay
Argentina
Uruguay
RTA Disputes
WTO Disputes
Graphs by member state


Disputes Initiated by NAFTA Member States
United States
Canada
Mexico
RTA Disputes
WTO Disputes
Graphs by member state

The data on forum choice and dispute experience are gathered from a number of different sources. Data on a member's states regional dispute experience are collected from two key sources. I utilize data in the Integrated Database of Trade Disputes (IDATD) from the United Nations Commission of Latin America and the Caribbean (ECLAC)[9] for disputes before the bodies at the CAN, CACM, and MERCOSUR. All of my measures of NAFTA dispute experience are extracted directly from the decisions and information available from the NAFTA Secretariat website.[10] For NAFTA disputes, I have collected data on disputes that invoke either Chapter 19 or Chapter 20. I also cross reference the data collected from the NAFTA Secretariat website against the IDATD data. Data on disputes before the dispute settlement body of the World Trade Organization are gathered from the WTO dispute settlement gateway[11] and cross referenced against the IDATD and the WTO Dispute database collected by Horn and Mavroidis (2011).[12]

**Figure 3.2: Number of Disputes for Each Subject Area, By Forum**




[9] These data are available at http://idatd.eclac.cl/controversias/index_en.jsp. This provides data on trade disputes at the Andean Community (CAN), Central American Common Market (CACM), Common Market of the South (MERCOSUR), NAFTA, WTO, and the Caribbean Community (CARICOM).
[10] <http://www.nafta-sec-alena.org/en/view.aspx?x=225>
[11] These data are available at <http://www.wto.org/english/tratop_e/dispu_e/dispu_status_e.htm>. This provides data on the participants, subject, and all available documents associated with the dispute.
[12] These data are available as an EXCEL file at < http://go.worldbank.org/X5EZPHXJY0>.

The data on forum choice, previous experience, and other relevant variables are collected at the directed-dyad-year-subject level. I utilize a directed-dyad format to capture each unique potential complainant-respondent combination; this yields fifty-eight unique dyads. As previously mentioned, the temporal range of the data set is 1995 to 2010. The final element of this unit analysis is subject area; which are defined based on the harmonized system codes and author defined coding rules. The first five subject areas – agriculture, primary commodities, low-technology manufacturing, machinery/electrical, and miscellaneous – are determined by the harmonized systems codes associated with goods traded among states. The final three subject areas – services, intellectual property, and general/unclear – are defined by the author and capture those disputes that do not include an associated harmonized systems code or cover a wide array of products.[13] Figure 3.2 demonstrates the frequency of disputes for each subject area over time by regional trade agreement. With an observation for each of the fifty-eight directed-dyads associated with the regional agreements in this analysis for each year and subject area, I have a total of 12,208 observations. The summary statistics associated with the variables in this data set are reported in table 3.2.

**Table 3.2: Summary Statistics**

| Variable | Observations | Mean | Stand. Dev. | Minimum | Maximum |
|---|---|---|---|---|---|
| *Forum Choice* $_{ijst}$ | 11,744 | 0.2841 | 0.5516 | 0 | 3 |
| *# Regional Dyad Disputes* $_{ijst-1}$ | 12,208 | 0.0885 | 0.6155 | 0 | 38 |
| *# Regional Dyad Disputes* $_{ijt-1}$ | 12,208 | 0.7077 | 2.6084 | 0 | 59 |
| *# All Regional Disputes (ALL)* $_{ijst-1}$ | 12,208 | 0.3839 | 1.4481 | 0 | 44 |
| *# All Regional Disputes (MS)* $_{ijst-1}$ | 12,208 | 0.2901 | 1.2908 | 0 | 44 |
| *# Regional Disputes (5YR Sum)* $_{ijst-1}$ | 12,208 | 0.4283 | 2.0891 | 0 | 70 |
| *# Regional Decisions* $_{ijst-1}$ | 12,208 | 0.0466 | 0.3360 | 0 | 8 |
| *# Regional Decisions* $_{ijt-1}$ | 12,208 | 0.3729 | 1.1226 | 0 | 12 |
| *# WTO Dyad Disputes* $_{ijst-1}$ | 12,208 | 0.0032 | 0.0718 | 0 | 4 |
| *# WTO Dyad Disputes* $_{ijt-1}$ | 12,208 | 0.0256 | 0.2142 | 0 | 4 |
| *# All WTO Disputes* $_{ijst-1}$ | 12,208 | 0.0066 | 0.1057 | 0 | 4 |
| *# WTO Dyad Disputes (5YR Sum)* $_{ijt-1}$ | 12,208 | 0.0154 | 0.1977 | 0 | 6 |
| *# WTO Decisions* $_{ijst-1}$ | 12,208 | 0.0036 | 0.0867 | 0 | 4 |
| *# WTO Decisions* $_{ijt-1}$ | 12,208 | 0.0288 | 0.2518 | 0 | 4 |
| *# Third Party* $_{it-1}$ | 12,208 | 0.9344692 | 1.906721 | 0 | 12 |
| *Ln GDP pc* $_{it-1}$ | 12,208 | 7.8081 | 0.8535 | 6.4542 | 10.5636 |
| *Ln GDP pc* $_{jt-1}$ | 12,208 | 7.8081 | 0.8535 | 6.4542 | 10.5636 |
| *Ln Sector Exports* $_{ij\ s\ t-1}$*/ GDP* $_{i\ t-1}$ | 6,421 | -10.5516 | 7.3704 | -24.4892 | 3.0288 |
| *Power* $_{ijt-1}$ | 12,208 | -1.0301 | 1.0213 | -4.6166 | -0.0099 |
| *Ln Total Trade/ GDP* $_{i\ t-1}$ | 12,208 | 3.8975 | 0.4882 | 2.5134 | 4.9162 |
| *Sector Exports* $_{ij\ s\ t-1}$*/ Total Exports* $_{ij\ t-1}$ | 4,415 | -2.6083 | 1.7427 | -13.5404 | -0.0045 |
| *Polity 2* $_{it-1}$ | 12,208 | 7.1016 | 3.2235 | -8 | 10 |
| *Polity 2* $_{jt-1}$ | 12,208 | 7.1016 | 3.2235 | -8 | 10 |

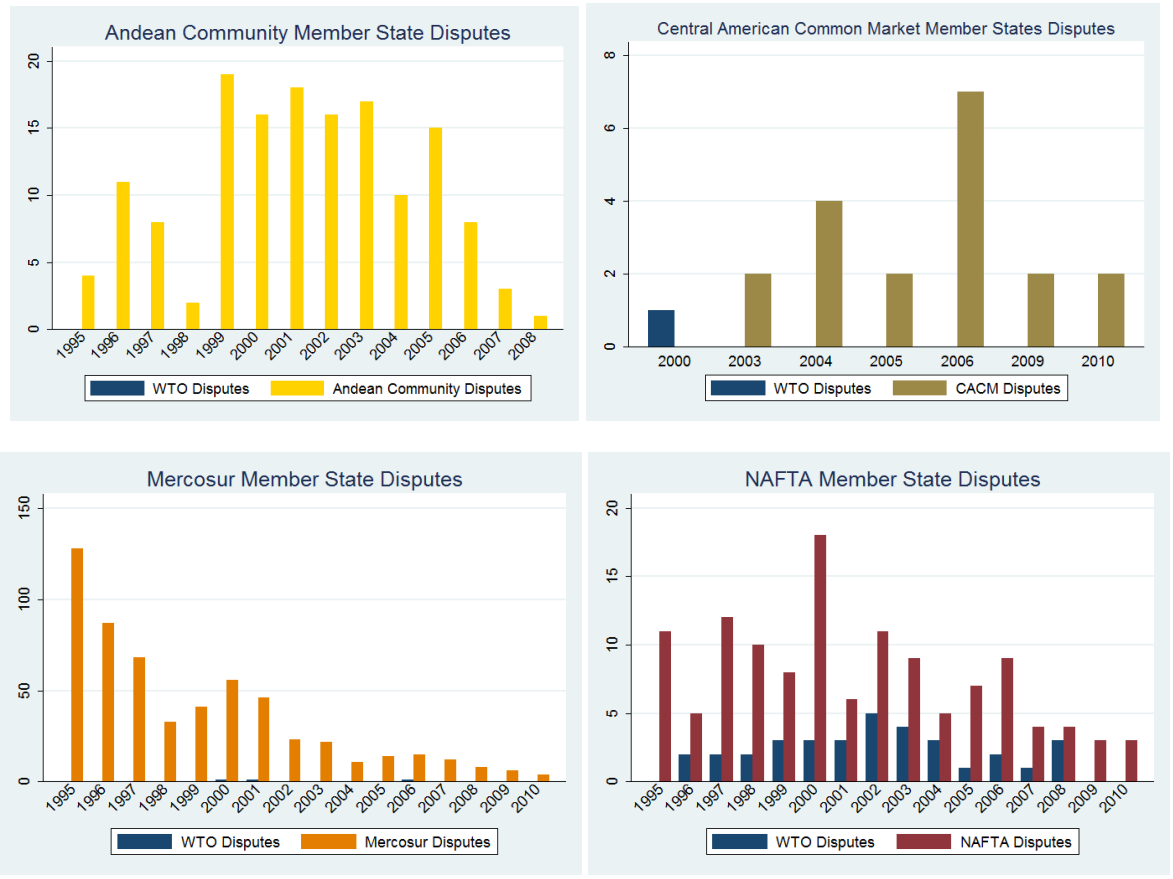
[13] The general/unclear category also includes disputes that cited harmonized system codes across subject areas.

| | | | | | |
|---|---|---|---|---|---|
| *RTA Dispute* $_{ijst-1}$ | 12,208 | 0.0496 | 0.2170 | 0 | 1 |
| *WTO Dispute* $_{ijst-1}$ | 12,208 | 0.0014 | 0.0373 | 0 | 1 |
| *Both Dispute* $_{ijst-1}$ | 12,208 | 0.0011 | 0.0338 | 0 | 1 |
| *CAN* | 12,208 | 0.3460 | 0.4757 | 0 | 1 |
| *MERC* | 12,208 | 0.2202 | 0.4144 | 0 | 1 |
| *CACM* | 12,208 | 0.367 | 0.482 | 0 | 1 |
| *NAFTA* | 12,208 | 0.0668 | 0.2498 | 0 | 1 |

### 3.2.1 CAPTURING THE FORUM SHOPPING DECISION

Based on the nature of the forum shopping decision, it is essential to capture all of the alternatives available to a state when looking to resolve an international trade disputes. The key variable of this original data set is *Forum Choice*, which acts as the dependent variable in the analyses in chapters four and five. This categorical variable captures the different alternatives available to a state when facing a potential trade dispute with another member state of a regional trade agreement. The variable *Forum Choice* is operationalized as a categorical variable in order to help explain not only why states initiate disputes at a regional forum, but also provide insight into the choice to utilize this body instead of the dispute settlement body of the WTO, which is the focus of this research. This variable is coded as: a "0" when no dispute is filed for directed dyad *ij* in a subject area *s* in year *t*; a "1" when a regional dispute is filed for directed dyad *ij* in a subject area *s* in year *t*; a "2" when a WTO dispute is filed for directed dyad *ij* in a subject area *s* in year *t*; and finally, a "3" when both a regional and WTO dispute are filed for directed dyad *ij* in a subject area *s* in year *t*. This four part categorization captures all possible dispute resolution alternatives available to a state; in a given year, a state can choose to not initiate a dispute, resolve a dispute at either the regional forum, the global forum of the WTO, or to initiate at both forums.

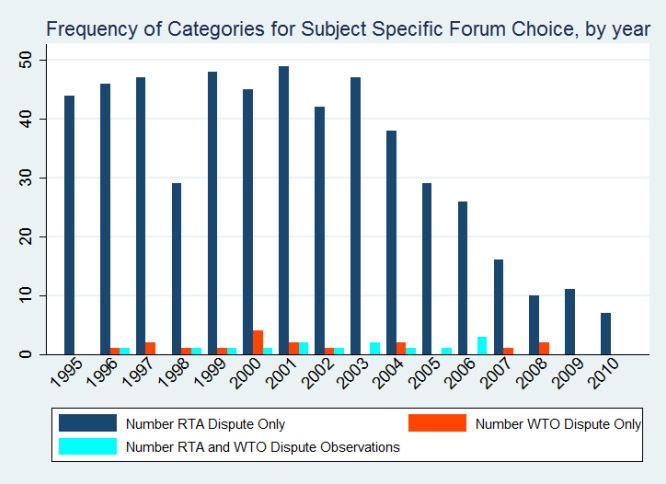
**Figure 3.3: Number of Disputes for Each Forum, By Year**




This variable is constructed based on the 1,207 regional disputes and 38 WTO disputes initiated against the member states of the regional trade agreements in this data.[14] To highlight the patterns of use to resolve disputes, which are captured in *Forum Choice* variable, I present the number of disputes initiated at these forums between 1995 and 2010. First, figure 3.3 shows the total number of RTA and WTO disputes for each year by regional dispute settlement body.[15] This is the count of disputes initiated across the time frame captured by this data set. The next figure, figure 3.4, demonstrates the dispute initiation pattern by year; it shows the frequency of each of the dispute initiation categories between 1995 and 2010.[16] Both graphs demonstrate the frequency of use of a regional body if a dispute is initiated.

[14] The count of regional disputes includes 49 disputes initiated by the Board of Cartagena Agreement and 238 disputes initiated by General Secretariat against member states at the Andean Community dispute settlement mechanism.
[15] These graphs are also found in Chapter 1.
[16] When including the category "no dispute initiated" the graph becomes hard to read. This "no dispute" category is the most frequent coding for each directed-dyad-subject year.

**Figure 3.4: Frequency of Each Category of Variable *Forum Choice***




### 3.2.2 MEASURING PREVIOUS REGIONAL DISPUTE EXPERIENCE

How can previous regional dispute experience be measured to accurately assess its impact on the selection of a regional forum instead of the multilateral dispute settlement forum of the WTO and, as a result, the stumbling block role of regional trade dispute settlement mechanisms? Important in understanding previous experience is that there are two primary roles a state can play in a dispute. First, a state can participate as a complainant. The complainant is the state that has been "wronged" in the trade dispute; a trade barrier or antidumping remedy, for example, is levied against the complainant by another state or entity based on some trade policy or practice.[17] Since the complainant is the "victim" when the barrier to trade is enacted, it is these states that bring a dispute to the regional or World Trade Organization dispute settlement mechanisms to have this external body resolve the dispute so the complainant is no longer "wronged." The second way in which a state can have previously participated in a dispute is as the respondent (also known as the defendant). The respondent is the state that is the "wrong-doer" in the trade dispute; this state is the one accused of wrongfully implementing the barrier to international trade against the complainant.

[17] Mansfield, Milner and Rosendorff (2002) posit a median-voter explanation for tariff policies.

For all of the previous experience measures used in the analyses in chapters four and five, a state's prior dispute experience is captured as the current potential complainant's previous experience in a regional or WTO dispute as a respondent. This is done in order to minimize the potential bias introduced from the selection associated with cases. A complainant selects not only where a dispute is filed but also whether or not a dispute(s) is filed. Considering the effect of previous experience as a complainant would introduce selection bias because of this decision-making calculation.[18] In contrast to participation as the complainant, the respondent chooses neither whether or not a dispute is filed nor the forum utilized to resolve the dispute.

Not all disputes initiated against a state are alike. To account for this, I have captured two types of previous regional dispute experiences: experience in general and in a particular subject area. This is done in order to fully understand the effect of previous regional experience on forum choice. For example, a state may learn from its previous experience in an agricultural dispute and generate a dispute resolution infrastructure that ameliorates the costs and difficulties and increases the accuracy of expectations in some future disputes – i.e., future agricultural disputes – but does not do so to the same degree, if at all, for others – i.e., for disputes in other issue areas, such as a low-technology manufacturing dispute. Further, the domestic salience and/or potential compliance difficulties of disputes in a particular subject area may influence the relative importance of a dispute.[19] By capturing the key explanatory variables as both general and subject-specific events and experiences, I am able to gain insight into the types of learning that occurs through previous experience and how learning influences a state's forum choice in its efforts to resolve a current trade dispute. Estimating models with each of these operationalizations will allow me to assess if a state learns from particular types of regional dispute experience or all types, which will provide a more nuanced understanding of the stumbling block role of regional trade dispute settlement bodies.

[18] See, among others, Greene (2003, 782-785), Heckman (1979), Kennedy (2008, 270-277), Puhani (2000).
[19] Cortell and Davis (1996) find that the domestic structural context and the domestic salience of a norm and/or rule generated at the international level will influence the degree to which the norm and/or rule will influence behavior. Acharya (2004) also expects that the domestic attributes will influence the international norm.

In addition to generating variables that capture both the general and subject-specific previous dispute experiences, I also have generated measures that capture the different facets of previous experience at the dispute settlement bodies of regional trade organizations. Disaggregating the different parts of previous regional experience at the dispute settlement body of a regional trade organization allows me to analyze when, and under what conditions, previous experience influences forum choice in current disputes. To assess the disaggregated role of previous experience – and the learning that occurs through this previous experience – I have collected and coded three different measures: the number of disputes initiated; the number decisions issued in these disputes; and the number of three different types of rulings issued in these decisions.

To empirically assess the relationship between previous dispute experience, learning capacity, and forum choice – which would provide the necessary support for the hypotheses developed in chapter two – I first use the number of the disputes initiated regionally and at the WTO to proxy dispute experience. Through dispute initiation, a state gains information about how to police a partner's trade policies, when policies are inconsistent with the partner's obligations as a member state of the institution, as well as costs and procedures associated with initiating a dispute before a regional forum, among other things. Based on my focus on previous experience as a respondent, a state is thus considered to have previous regional dispute experience if a dispute is initiated against it at the regional forum at a given point in time. For this measure, there is no restriction on the dispute in terms of how far it proceeds; if the dispute is simply initiated it is counted. To account for the different learning patterns across disputes, states, and regional agreements, I have coded three distinct measures of previous dispute experience used in chapter four.

The first measure of these measures captures the previous dispute experience within the directed-dyad; this measure is a count of the number of previous disputes initiated against state *i* (the current potential complainant) in a given year by state *j* (the current potential respondent). There is a subject-specific variant of this measure, which is captured in the variable *# Regional Disputes* $_{ijst-1}$, and a general variant, which is captured by the variable *# Regional Disputes* $_{ist-1}$. The dyadic measure provides evidence

to allow me to assess the effect of learning and applying lessons learned from previous dispute experience with a particular partner to future disputes with that same partner. Previous regional dyadic dispute experience may be more influential for learning and future forum choice because these types of disputes provide not only insight into the dispute resolution process, but also the preferences and approaches of the partner with regards to resolving disputes regionally. This includes, among other things: the strategies of the other state to identify trade barriers; the preferences of the other state with regards to the implementation of barriers to trade; the ease in reaching a mutually agreeable solution with the other member state; and the amount of domestic and international audience costs the other member state is willing to bear to resolve disputes regionally. One might note that measuring previous experience in this manner might be capturing another phenomenon that occurs at these forums: retaliatory initiation of disputes. However, this is not problematic for my analysis. A respondent in that prior dispute is still able to gather information from that dispute, learn from it, and apply what it learns when it initiates a retaliatory dispute in the present year.

In chapter four, I also derive different variables to capture previous regional dispute initiation experience to assess the robustness of my first set of results. Each of these variations provides a different interpretation as to how a state may garner information from previous regional dispute experiences. The first accounts for the fact that states may be able to learn about regional dispute settlement from all experiences as a respondent, not only the dyadic experiences. To capture this, I generated the variable *# Regional Dispute Experiences (ALL)* $_{ist-1}$ and *# Regional Dispute Experiences (MS)* $_{ist-1}$.[20] These variables are a count of all disputes initiated against a potential respondent by any relevant actor, for the former, and by any other member state, for the latter, in year *t-1* for subject area *s*.[21] This measure of overall experience provides little insight on learning about a particular partner but it captures what a state learns about the process and the institution, which can allow a state to increase the accuracy of its expectations

[20] I also generated measures that captured the amount of all respondent experience across subject areas. These variables were not used in any of the models reported within chapter four or its appendices.

[21] The two measures allow me to account for disputes initiated by the Board of Cartagena Agreement or the General Secretariat at the Andean Community dispute settlement body. The measure with "ALL" captures these disputes while "MS" is a count of only those disputes initiated by member states.

of the costs, benefits, and outcomes associated with dispute resolution at a particular forum in the current year. This measure thus expands the conceptualization of what states are able to learn and apply to future trade dispute resolution.

The second variable used in chapter four to assess the robustness of the results expands the understanding of what previous dispute initiation experience entails. The measures discussed above address the amount of disputes initiated in the prior year while this measure expands the time frame for that count. A state may look to its most recent experiences to develop the infrastructure to resolve disputes and generate expectations – i.e., short-term learning – or a state may look to a greater subset of previous experiences to develop these same things – i.e., long-term learning. In terms of short-term learning, the most recent experiences provide a new slate of information that states only draw from for future considerations. When long-term learning occurs, a state builds its infrastructure and expectations by cumulatively learning from additional disputes. Since the learning that occurs from previous experience, can be based on most recent disputes or can be accumulated over time, I also use the variable *# Regional Dispute Experiences (5-Year Sum)*$_{ijst-1}$. This variable is a count of the number of disputes initiated against state *i* by state *j* in years *t-1* to *t-5* in subject area *s*.[22] Mathematically, this variable is a sum of the values of the first measure of regional dispute experience *(# Regional Dyad Dispute Experiences*) for the five years prior to the year of the particular observation. This measure will allow me to assess whether a state only looks back to its most recent experiences to gather information about the forum, etc. or if it looks to and utilizes the information acquired in dispute initiation experiences in disputes at the forum over time.

I expect that all of these alternative measures of previous regional dispute initiation experience will demonstrate the robustness of the results; yet, they are weaker proxies of learning. As a result, the effects will be smaller than the ones observed with the primary operationalization of previous regional dispute experience. As discussed above, there is quite a good deal a state can learn simply from having a

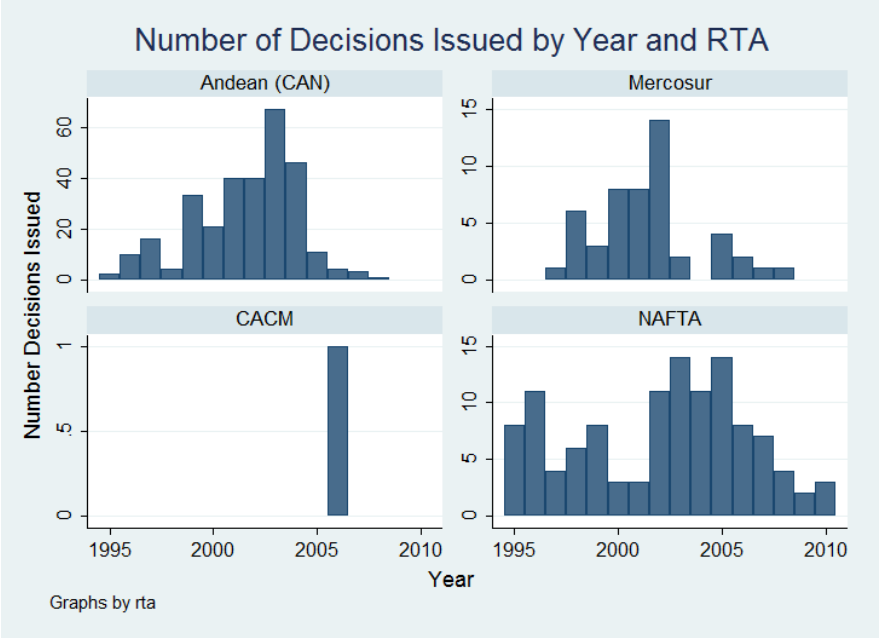
[22] A measure of long-term dyadic dispute initiation experience across subject areas was created but not used in the models in chapter four and its appendices.

dispute initiated against it. However, much of the information gathered may deal directly with the relationship between the members of the dyad; as such, some information may be less applicable across other dyadic relationships and interactions in the regional body. Furthermore, I expect that the long-term measure of previous experience – the five-year sum – should also be a weaker proxy. Over a longer time frame, a state may acquire more sources of information other than, or in addition to, the aggregate information provided from dispute initiation over the past five years. For example, over a five-year period, a state may be able to assess the domestic audience costs associated with the behaviors of the other member of the dyad, which would influence the expected costs, benefits, and outcomes of utilizing a regional dispute settlement body. This type of information learned by a state may be less attributable to the dispute initiation itself than it is to other facets of the dispute – such as whether or not a decision is issued – and the spillover effects of the dispute and/or a change in a trade practice or policy.

In chapter five, I provide a more nuanced understanding about how, what, and why states learn from previous experience by disaggregating the elements of a state's experience at the regional dispute settlement body. To do so, I utilize two measures of dispute experience: the first emphasizes the number of decisions issued at a regional forum in disputes where the potential complainant state has participated as a respondent; the second emphasizes the type of decisions issued. These variables are used because disputes that are initiated do not always reach the ruling phase and the rulings issued can vary across these disputes. When a dispute passes the first few phases of trade dispute resolution system – the identification of a potential violation and the initiation of a dispute – to reach the ruling phase – where the panel issues its decision on validity and/or compliance of the measure at the heart of the dispute – a state can learn more of the nuances associated with the elements of resolving trade disputes at the regional level. When a decision is issued, the state learns about how the body reaches a conclusion, what elements are important in finding a policy consistent or inconsistent with RTA obligations, the costs associated with seeing a dispute through the ruling phase, among other things. Like the measures of dispute initiation experience, I generate both subject-specific and general measures of the number of decisions issued in a dispute; *# Decisions Issued* $_{ist-1}$ is a count of the decisions issued for the dyad in the previous

year for subject-area *s* while *# Decisions Issued* $_{i\,t-1}$ is the general measure. Utilizing the former, I also create a cumulate measure of decisions issued that is used to test my expectations in chapter five. The variable *# Regional Dispute Experiences (5-Year Sum)*$_{i\,s\,t-1}$ is the sum of the number of decisions issued in disputes against potential complainant *i* in the previous five years in subject area *s*. Each of these measures looks at the total number of decisions issued in all disputes initiated against a potential complainant since individual decisions are not issued for each unique dyad involved in the dispute. Figure 3.5 presents the number of decisions issued in regional dispute settlement bodies between 1995 and 2010 for each of the regional agreements in my data set.

**Figure 3.5: Total Decisions Issued in Trade Disputes Each Year, By Regional Trade Agreement**



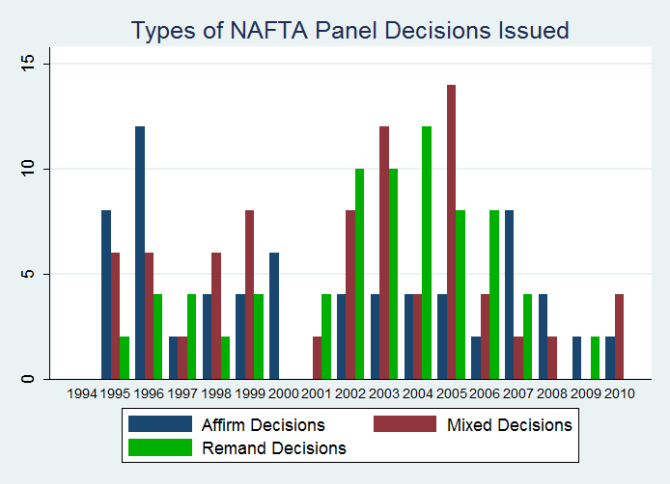

In this chapter, I also disaggregate previous experience further to capture variation in these decisions. Each decision can find that the policy/practice at the heart of the dispute does or does not violate the rules of the organization or whether it violates some of the rules but not others. What a state learns and uses to update its expectations and beliefs will likely vary based on the type of decision issued. A state may learn more from a ruling that both approves and denies the claim of illegality – since there is a divergence between expectations and outcomes – and learn less from a decision that affirms, which

confirms the legality of the policy and produces policy continuity.[23] To account for this, I utilize the data available in NAFTA decisions to code a series of variables that count the number of decisions that affirm, mix, or remand the respondent's policy at the heart of the dispute.

Again, I look at decisions issued in disputes where the state participated as the respondent. These measures account for the body's ruling on the policies of the state that could presently initiate another dispute.[24] The data on the amount of each type of ruling comes directly from the publically available decisions on the NAFTA Secretariat data set. This is a key reason why this section utilizes only NAFTA data; the entire texts of all decisions are available to read and analyze. This sample restriction also means that the analyses of learning and forum choice are limited to understanding the choice between the NAFTA and WTO. To create these measures, I have read each of the decisions issued in disputes before a NAFTA Panel to determine the type of ruling. A decision is considered to be an "affirm decision" when the NAFTA panel decision notes that the measure at the heart of the dispute is not inconsistent with the obligations under the NAFTA agreement and/or the panel notes that it has affirmed the measure. A decision is counted as a "remand decision" when the NAFTA panel decision notes that the measure at the heart of the dispute is inconsistent with NAFTA obligations and/or orders that it be remanded, i.e., sent back, to the domestic investigating authority to be changed so that it is consistent with relevant trade laws. A "mixed decision" is a decision that includes both of these elements and/or a decision that has a large number of dissentions from the panelists. This captures those disputes where the decision(s) neither unilaterally supports nor denies the legality of the measure, policy, or practice that generated the dispute. The frequency of each type of ruling in the decisions issued by the NAFTA panels is demonstrated in figure 3.6.

[23] Levy (1994, 304); Meseguer (2005); Wiegand and Powell (2011)
[24] I have also generated subject-specific variables that measures the number of affirm, mix, and remand decisions for each subject area. However, the models that utilize these variables fail to converge, which is why they are not reported.

**Figure 3.6: Total of Each Type of Decision Issued in NAFTA Disputes by Year**




By varying my conceptualization of previous experience in all of these different ways, I will be able to acquire a more nuanced understanding of the learning that takes place with regards to trade dispute settlement and how it is applied to future dispute resolution endeavors. I can assess not only the robustness of my findings on the stumbling block role played by regional dispute settlement bodies, but also what conceptualization of previous regional dispute experience proves to be most influential. Learning which form is most influential provides an understanding of whether it is simple or complex learning or some other mechanisms, such as emulation, that is what explains regional forum choice when a multilateral alternative exists.

### 3.2.3 Measuring Learning Capacity

Key in my theory is the idea that states do not learn consistently. This is not only determined by the amount of experiences that a state has to draw from. Based on the theory laid out in the previous chapter, the variation observed in learning and the influence of previous experience on forum choice results from the different levels of learning capacity. This learning capacity is determined by the characteristics that make learning more or less difficult and/or influences the ability of a state to accurately translate information into a new or updated understanding of what is involved with resolving a dispute regionally. As a result, learning capacity is influenced by resource capacity constraints- which

limit the resources available to gather and internalize this information – or perceptions of the importance of the dispute – which affect whether or not the experience is viewed through a certain lens. Learning capacity is thus comprised of a state's ability and incentive to learn. Since learning capacity is comprised of two parts, I have operationalized learning capacity using a number of measures. To capture the resource capacity constraint component, which accounts for a state's ability to learn, learning capacity is measured as the level of development. The second component, which captures incentive to learn, is more difficult to capture; I use three different measures to capture the importance of the dyadic relationship of the disputants, which will influence the lens through which a state views the information gathered. To account for the conditioning effect of each of these elements, each measure is interacted with the relevant measure of previous experience at a regional body.

The first measure – level of development – is the natural log of the gross domestic product (GDP) per capita of the state *i* in the dyad (the potential complainant) in the previous year.[25] As argued in the previous chapter, the level of development can influence the state's ability to translate information into an enhanced infrastructure for dispute resolution and/or greater accuracy of expectations. The measure of GDP per capita is the best way to capture this element of learning capacity because it can affect the legal, political, and economic resources available to a state. By itself, GDP per capita influences the ability to initiate a greater number of disputes as well as the initiation infrastructure established to resolve trade disputes. This operationalization of the first part of learning capacity thus captures the ability of states to not only have a higher baseline capability for resolving disputes but also the amount that the state has the potential to learn from each additional dispute experience. Learning capacity is thus expected to be inversely related to the potential complainant's GDP per capita.

Learning capacity is not only limited by the resource capacity constraints faced by a state. A state's learning capacity also varies based on the state's incentive to learn and the manner in which it views the information it acquires. As argued in the previous chapter, the incentives influence the context associated with previous experience, which can cause states to learn divergent things or at different rates

[25] These data are from the World Bank World Development Indicators (2011).

from similar experiences. I have argued that the dyadic relationship between the disputing parties influences the incentives to learn and the context that learning takes place under. A stronger dyadic relationship increases a state's incentive to learn because of expectations associated with the costs of failing to resolve the dispute and the likely frequency of disputes in the future. Additionally, it will color the manner in which a state interprets and internalizes the information acquired from previous regional dispute experience. I capture the dyadic relationship between the disputing parties as the economic relationship between these parties; this includes both the trade relationship and the disparities in economic size.

First, as trade with state *j* becomes more important to state *i*, it may view disputes between these parties as more important. As a result, it puts more effort towards learning from prior regional disputes to reduce costs, increase benefits, and increase the accuracy of expectations on outcomes, all of which would be utilized in future forum shopping decisions. The perceived importance comes from both domestic and international sources. If trade with state *j* is important to state *i*, this implies that a disruption in trade may hurt an important sector of the economy or the economy as a whole. As a result, state *i* will prefer to make the least costly and/or time consuming choice when initiating disputes to minimize the effects on the economy and domestic interest groups. Additionally, perceived importance may derive from the strength of the directed-dyad's trade relationship because of the empirical association between the dyad's trade levels and future dispute initiation. If a strong trade relationship exists, state *i* may expect that a greater number of disputes are likely to take place in the future. As a result, a previous regional dispute presents a meaningful learning opportunity that the state is unlikely to pass up.

To capture the importance of trade in the dyad, I use two measures. The first captures the importance of sector exports when compared with all exports from state *i* to state *j*. This variable – $Sector\ Exports_{ijst-1}/Total\ Exports_{ijt-1}$ – is the natural log of the value of the exports from the potential complainant (state *i*) to the potential respondent (state *j*) in the relevant subject area in the past year divided by the

value of all exports from state *i to j* in that same year.[26] I expect that learning capacity is positively related to this ratio. The second measure of the importance of the trade relationship is also expected to exhibit this positive relationship with learning capacity. This measure captures the importance of the exports to the potential complainant's overall economic well-being. The variable – $Sector\ Exports_{ijst-1}/GDP_{i\ t-1}$ – is the natural log of the value of exports from the potential complainant (state *i*) to the potential respondent (state *j*) in the relevant subject area in the past year divided by the potential complainant's GDP in that previous year.[27]

The final measure that captures the dyadic relationship component of learning capacity is the variable *Power*. This variable captures the economic disparities between the disputing parties.[28] This variable is measured as the natural log of the complainant's GDP in year *t-1*over the sum of the complainant and respondent's GDPs in year *t-1*.[29] When the potential complainant state wields less (more) power than the other in the dyad, I expect that the state will be more likely to try to garner more (less) information from each experience. Unlike the trade relationship measures of the dyadic relationship component of learning capacity, I expect this measure to be inversely related to learning capacity. Through learning, a state has the potential to overcome the limitations faced by being the less powerful state in the dyad. The incentives to learn increase in order to be selective in future disputes to ameliorate the disadvantages faced by a less powerful state *i*, which may not have otherwise been able to fight against its more powerful partner. Again, I capture the conditional effect by interacting this measure of *Power* with my measures of previous experience. I expect, however, that the inverse relationship

[26] This variable is calculated using data from UN COMTRADE available from WITS (2012). For subject areas determined by the HS codes, this is measured as the sum of the gross exports from the complainant to the respondent for all HS chapters associated with the relevant subject area over the complainant's GDP. Data are unavailable for sectoral trade in services, intellectual property, and for the general/unclear subject area.
This term is also included in all models as an alternative explanation, as described below.

[27] These data are extracted from the United Nations COMTRADE data available on the World Integrated Trade System (WITS) database (2012) and supplemented with data from the World Bank World Development Indicators (2011). For subject areas determined by the HS codes, the numerator is measured as the sum of the gross exports from the complainant to the respondent for all HS chapters associated with the relevant subject area, extracted from the WITS database, over the complainant's GDP, extracted from the WB WDI. For the services subject area, this variable comes directly from data on the complainant's services trade over GDP, which is extracted from the WB WDI. Data are unavailable for sectoral trade in intellectual property and for the general/unclear subject area. This term is also included in all models as an alternative explanation, as described below.

[28] The data used to construct this variable come from the World Bank World Development Indicators (2011).

[29] Gomez-Mera and Molinari (2013)

between *Power* and learning capacity will be apparently only when conditioning the overall measure of previous regional dispute experience. When conditioning the effect of the decisions issued in these disputes, I expect a positive relationship based on the compliance considerations that may accompany a decision. Given the lack of enforcement mechanisms at the regional dispute settlement bodies, the measure of the economic power disparities will also capture the ability of a state to wield its influence to spur compliance and/or constraints that will be hinder a state's ability to initiate another dispute in the following year.

These measures of learning capacity thus demonstrate that to learn from previous experience states must have the incentive and ability to do so. The incentive is captured by the three measures of dyadic relationships; each aims to capture the value of the dispute to the potential complainant. A state that perceives the relationship with the partner to be of greater value will learn more from each experience it has at a regional dispute settlement body. Both the incentives and ability to learn help provide insight into understanding why learning is not consistent across actors and why the extent of learning from previous regional dispute experience is conditioned by learning capacity.

## 3.3 Accounting for Alternative Explanations

Beyond the conditional effect of previous experience via my learning mechanism, there are a number of other elements I expect would influence the decision to initiate a dispute and the forum chosen to do so. The first set of alternative explanations captures the other ways that a state may learn about the costs and laws associated with dispute settlement at an international trade organization: experience at the global, multilateral dispute resolution forum at the WTO. Doing so can account of potential cross-institutional effects between regional and multilateral dispute settlement bodies.[30] First, I include a measure of participation as a respondent in WTO disputes. To account for the nuances that also exist in

[30] Gomez-Mera and Molinari (2013). The importance of precedence (Busch 2007) and the ability of a regional body to cite WTO trade law can also influence the cross-institutional effect.

these multilateral disputes, I have a generated two variables of WTO dispute experience.[31] The first, *# WTO Disputes* $_{i\,s\,t-1}$, is a count of the number of WTO disputes initiated against the potential complainant, state *i*, by the potential respondent, state *j*, in subject area *s* in year *t-1*. To account for the different understandings of regional dispute initiation experience, I have different measures of WTO dispute initiation. I have calculated the total number of WTO disputes initiated across subject areas, by all member states of the regional agreement, and over the previous five years.[32] For my empirical analyses in chapter five, I utilize *# WTO Decisions* $_{i\,s\,t-1}$, which is the count of the number of decisions issued in WTO disputes initiated against state *i* by the other member states of the regional organization in subject area *s* in year *t-1*.

A key difference between experiences at the WTO and regional bodies is that there are more than two ways a state can participate and learn about dispute resolution through use of the WTO. Again, I do not include measures of experience as a complainant because of issues associated with endogeneity, but a WTO member state could also participate as a third party to the dispute at the WTO. To account for this, I include the variable *# Third Party* $_{i\,t-1}$, which is the total number of times the complainant in the directed-dyad participated as a third party in a WTO dispute in the previous year, as a control variable.[33] A third party is a WTO member state that has formally requested – and been approved – to have that standing. States are afforded this role based on a substantial or systemic interest in the case.[34] When afforded standing as a third party, a state has the right to be heard by, make written submissions to, receive documents submitted by the complainant and respondent to the WTO dispute settlement body.[35] Having experience by participating as a third party experience is distinct from direct dispute experience as a respondent but still could provide great insight into dispute resolution at the WTO and potentially to regional dispute resolution. Participating as a third party is distinct from participation as a respondent

[31] All WTO data is extracted from the WTO Dispute Settlement Gateway (2011)
[32] The variations of these measures are used where appropriate in the models.
[33] All WTO data is extracted from the WTO Dispute Settlement Gateway (2011)
[34] This definition restricts third parties to formal third parties to distinguish them from non-formal participants such as states or non-governmental organizations that submit *amicus curiae* documents to the WTO Dispute Settlement Body.
[35] See, among others, Busch and Reinhardt (2006) and Mavroidis and Palmeter (2004). A description of the role of third parties to the dispute is also available in Annex 2 of the Dispute Settlement Understanding (DSU), which is available electronically at < http://www.wto.org/english/docs_e/legal_e/28-dsu.pdf>.

because it is a less costly pathway for states to learn how to use and/or the laws associated with the rulings issued by the dispute settlement mechanism at the WTO.[36]

The second set of alternative explanations comes from the trade preferences and forward-looking considerations of a state. This set of controls comes primarily from arguments put forward by Busch (2007), who demonstrates the role of state preferences on the choice between the NAFTA and WTO forums. One of the elements emphasized by Busch in his argument on forum shopping is the role of precedent setting considerations and trade policy preferences. With regards to the former, the ruling issued by a forum sets precedent, which means that the ruling is added to an institution's body of case law that the Panel or dispute resolution body can draw on to use in future rulings and/or recommendations.[37] The forum choice is partly a function of the complainant's expectations associated with the future use of the forum and the decision in the current dispute, which would be added to the body of case law.

Initiating a dispute at a particular forum may be more costly if, for example: first, a state expects that it is more likely that the precedent will be used against it in the future than it will be used against others; and/or, second, due to the costs associated with adjusting its trade policies now and in the future in accordance with the decision issued in the current dispute and the resultant precedent. The state's preferences over trade policy – as either more free-trade oriented or protectionist – are based on the characteristics of the trading relationship across the member states of the overlapping institutions, also influences the state's expectations as to how frequently the precedent can be used in disputes against other states relative to use against the state by others. To account for this alternative explanation, I utilize the two of the three variables described above to capture the dyadic relationship component of learning capacity: *Sector Exports/GDP* $_{i\,s\,t-1}$ and *Sector Exports/Total Exports* $_{i\,s\,t-1}$. I also include *Trade* $_{it-1}$, which is the complainant state's total trade over its GDP.[38] This measure captures the importance of trade to the

[36] Bown (2005a); Busch and Reinhardt (2006); Hutnick (2010)
[37] Using the body of case law – i.e., the precedents set in previous disputes – the relevant dispute settlement body is seeking to support or determine a position or decision and/or to limit the body's jurisdiction. This precedent set in a decision can also be used against the complainant of that dispute in future disputes where it is allegedly acting inconsistently with its obligations associated with the international organization (a phenomenon known as role reversal).
[38] This variable is from the World Bank World Development Indicators (2011).

complainant's economy as a whole. I expect that these measures will proxy both precedent setting considerations and a state's trade policy preferences.

The choice of a regional forum over the multilateral forum of the WTO may also be a function of the resources available to each of the disputing parties. In the abundant literature on WTO dispute initiation these variables are important factors in explaining WTO dispute initiation.[39] As a result, it is also important to control for this alternative explanation in my analysis of what influences forum choice. I measure this alternative explanation using the complainant and respondent state's GDP per capita from the previous year.[40] When assessing the costs and benefits of initiating a dispute at an international institution, a state must calculate the cost of doing so and the amount of money and resources that would be needed to pursue a dispute at a forum. Depending on the amount of available resources, a potential complainant may face limitations in terms of its ability to effectively pursue a dispute during the identification, analysis, initiation, and litigation phases at some or all available forums.

These limitations influence the number of cases a state can feasibly pursue in a given time period, where they can be pursued, and the opportunity costs associated with doing so; countries with greater capacity constraints are expected to file fewer cases because they lack the financial, human, and institutional resources to identify, analyze, pursue, and litigate a case.[41] I expect that these resource limitations will influence forum choice because of the variation in the costs associated with the resolution of disputes across regional and global trade dispute settlement forums. The magnitude of the expected human, financial, and institutional resources costs of utilizing a global, multilateral forum is expected to be higher than at a regional forum. Thus, I expect that the resource limitations of the complainant, which have been demonstrated to influence the choice to initiate a dispute at the WTO, could also influence the likelihood that a state will choose a regional over a multilateral forum.

[39] Davis and Bermeo (2009), Guzman and Simmons (2005), Huerta-Goldman (2010)
[40] This variable is from the World Bank World Development Indicators (2011)
[41] See, among others, Bown and Hoekman (2005), Davis and Bermeo (2009), Guzman and Simmons (2005), and McCall Smith and Tallberg (2005).

It is not only the level of the complainant's available resources that can influence the likelihood of initiating a dispute and selecting a regional forum over the WTO dispute settlement body. The respondent's available resources can also play a role in these choices. When deciding where and if to initiate a dispute, a complainant also considers the respondent's ability to comply if the panel/body was to rule its measure inconsistent with RTA/WTO obligations. When a state faces greater constraints, a complainant may expect that it may take longer for the potential respondent to comply completely with a ruling, if at all. As a result, a state may want to choose a forum that allows it to link other issue areas or trade elements in order to encourage compliance. When a respondent faces fewer constraints, a complainant may face greater difficulty in getting that respondent to voluntarily comply.

The third alternative explanation captured in my models deals with the ability of one party to wield its influence over the other; specifically, the role played by power asymmetries between the disputing parties in a state's choice of forum. An increase in the power asymmetries can influence the expected costs and benefits associated with litigating a dispute in general and at a particular forum. Power disparities can influence these costs and benefits both when the complainant is the weaker and more powerful state. Weak countries are likely to abstain from filing complaints against powerful states because of a fear of retaliation in the same or another issue area by the more powerful state against the weak state.[42] A weaker complainant may also select a particular forum based on the institutional facets of the particular forum that allow it to reduce and/or mitigate costs associated with filing against a more powerful state, such as the ability to form coalitions or the existence of a body to help the state overcome various limitations.[43]

Powerful states are also expected to be less likely to file disputes against weak ones; the states with greater power do not want to face political costs and be perceived as a "bully" against the weaker countries.[44] The forum may also factor in this regard; a more powerful party, may have a greater ability

[42] Guzman and Simmons (2005). Davey (2006) argues that it may only be to the more powerful states that retaliation options are truly effectively available.
[43] Davey and Sapir (2009)
[44] Bown and Hoekman (2007, 2008), Meagher (2007)

to use its power and influence to its own advantage at a regional forum than at the WTO. In some forums, power and power disparities may play a role in the likelihood of the eventual outcome being shaped by the parties to the dispute; many regional dispute settlement systems are more power based relative to the dispute settlement system of the WTO.[45] Power disparities may also play a greater role at a regional dispute settlement body than they otherwise would have at the WTO since power disparities are offset at a multilateral forum relative to a bilateral or regional forum.[46] The influence of the disparities in political influence is present in some of the previous disputes at the NAFTA, including the *Broom Corn Broom*s dispute between the United States and Mexico.[47] Power disparities, and the ability of power to be used to influence a dispute, may also impact the choice of forum because the ability of power to influence outcomes is associated with the legitimacy of that outcome.[48]

The prospects for compliance are also a key facet for forum choice when a complainant is the weaker or more powerful partner. For a weaker state, it may be more difficult to get compliance at one forum relative to the other available forum; the multilateral remedies available to states at the WTO when non-compliance occurs can help to strengthen a politically weak partner against its more powerful opponent in a way that is not provided by the regional alternative.[49] Further, there is a larger audience at the WTO to punish a powerful state if it engages in non-compliance and/or retaliation for the initiation of a dispute against a politically or economically weaker state. The power asymmetry in the directed dyad is captured by the variable $Power_{ij\ t-1}$, which is described above.

[45] See, among others, Davey and Sapir (2009), Davey (2006, 355-6). In NAFTA, for example, both Mexico and Canada have faced difficulties in obtaining compliance from the United States in two Chapter 20 cases and a Chapter 19 dispute, respectively (Davey 2006, 256). This is, however, contested by Luo (2006, who argues that agreed upon rules and not power politics have been the determinants of the outcomes of NAFTA disputes, as well as Busch and Reinhardt (2007) who argue that the transition from the GATT to the WTO has also been associatd with a transition from a power-oriented system to a rule-based system. The influence of power in the rulings issued influences the legitimacy of outcomes from the forum (Davey and Sapir 2009).

[46] Davey (2006), p. 356. Loungnarath and Stehly (2000, 67) argue that the "jurisdictionalization of the multilateral dispute settlement process" is favorable to states that would otherwise be unable to use its economic or political weight, since it is insufficient, to encourage change in greater economic powers.

[47] Loungnarath and Stehly (2000)

[48] Davey (2006), p.356.

[49] De Mestral (2006), p. 379. However, there is also the possibility that these remedies – the suspension of concessions and/or compensation – may be seen by the more powerful state as less costly than the alternative, compliance. This aspect explains non-compliance by the respondent, not the choice of forum by the complainant. Having these remedies could provide the politically weaker complainant with the best possible opportunity to gain compliance from the state with the policy inconsistent with trade rules.

The political system of the disputants is another alternative explanation for the stumbling block role of regional trade organizations. I operationalize the complainant's and respondent's domestic political system based on data from the Polity IV data set; I use the Polity2 measure of democracy.[50] I include these measures because the domestic political institutions can shape policy decisions as well as influence the potential domestic and foreign audience costs associated with initiating a dispute in general and at a specific forum.[51] The political systems of the disputants introduce a variety of barriers and limitations that may influence the ability of a potential complainant to not only initiate a dispute but whether or not disputes is initiated regionally, multilaterally, or at both forums.

The choice to initiate a dispute and utilize the dispute settlement body at a regional organization may be a function of institutional and temporal factors. While there are similarities across the regional dispute settlement bodies, differences exist in procedure, coverage, and enforcement, for example. The characteristics of the institution can thus influence the observed stumbling block effect of regional trade dispute settlement bodies. To account for this, I include a series of dichotomous variables to capture the specific regional dispute settlement body that the relevant dyad could use to resolve a trade dispute.[52] There are also temporal elements that can influence the decision to initiate and forum choice; both factors deal with potential dependence over time of the likelihood of dispute initiation. In all of my models, I control for the possibility that a dispute is initiated purely as a retaliatory move by the potential complainant by including the variables *NAFTA Dispute* $_{ij\ s\ t-1}$, *WTO Dispute* $_{ij\ s\ t-1}$, and *NAFTA and WTO Dispute* $_{ij\ s\ t-1}$, which are binary variables that capture the value of the dependent variable in the previous year. When examining the effect of the number of decision issued, I also include cubic polynomials to capture the potential dependence over time that may emerge from retaliatory endeavors, resources constraints, etc. based on the reference group for this set of models.[53] Including these variables, which capture institutional and temporal factors that can influence the likelihood of each dispute resolution

[50] Marshall, Jaggers, and Gurr (2010)
[51] See, among others, Allee and Huth (2006), Gomez-Mera and Molinari (2013), Mansfield, Milner and Pevehouse (2007, 2008), Milner (1997), and Milner and Rosendorff (1997).
[52] In all models, *NAFTA* is the reference group.
[53] Carter and Signorino (2010)

outcome, allows me to have confidence that my results are estimating the effect of learning through previous experience and, as a result, the stumbling block effect of regional dispute settlement bodies.

## 3.4 EMPIRICAL METHODOLOGY

Now that I have presented the variables, in what way is this data used to test the stumbling block effect of regional dispute experience? My argument focuses on a state's selection of a regional dispute settlement mechanism to resolve trade disputes *instead of* the dispute settlement body of the World Trade Organization. My original data set and dependent variable have been constructed to reflect this choice. Due to both the categorical nature of the dependent variable and the competition inherent in my main research question, the method I believe to best utilize the data I have gathered and provide an answer to this question is multinomial logit model. The model takes the following form:

$$\text{Forum Choice}_{ijst} = \beta_1 \text{ Previous Regional Experience}_{ist-1} + \beta_2 \text{ Learning Capacity}_{i(j)t-1} + \beta_3 \text{ Previous Regional Experience}_{ist-1} \text{ X Learning Capacity}_{i(j)st-1} + \beta_4 \mathbf{X}_{ijst-1} + \beta_5 \mathbf{W}_{ijt-1} + \beta_6 \mathbf{Z}_{it-1} + \varepsilon \quad (1)$$

In equation (1), *Forum Choice* represents my categorical dependent variable. The primary covariates are captured by *Previous Regional Experience, Learning Capacity*, and the interaction between those two variables. The different proxies of each are the variables described in detail above. The alternative explanations are captured by the vectors of dyadic, monadic, and time-invariant covariates represented by **X, W,** and **Z**. A common concern for the multinomial logit model is a violation of the independence of irrelevant alternatives (IIA) assumption; this is not expected to be a biasing factor in my empirical tests. My dependent variable – *Forum Choice* – captures all available alternatives to states to resolve an international trade dispute. Any additional category – e.g., the resolution of a dispute via bilateral means outside of the trade organization or membership in overlapping regional arrangements – is already incorporated in the existing categories – e.g., no dispute filed at an international forum and regional initiation, respectively.[54]

[54] In this way, my dependent variable avoids this IIA problem by combine options into a more general category (Kennedy 2008, 252).

In chapter four, which examines the effect of previous experience by looking at the overall amount of regional dispute experience, the reference group in my model is the decision to initiate only at the WTO dispute settlement body. I chose this as the reference group because I am interested in explaining why a state would choose *not* to utilize only the WTO forum and instead utilize a regional forum to resolve a trade dispute. As demonstrated in the appendices, the results remain consistent when utilizing the "no dispute" outcome as the reference group. Based on these findings and estimation issues, this category is used as the reference group in the re-estimated models in chapter five, which examines the effect of previous experience as measured by the number of decisions issued in a dispute initiated against a potential complainant. Based on the nature of the multinomial logit model and that the conditional effect of previous experience is estimated in most model specifications, I also estimate and report the conditional marginal effects associated with the effect of previous regional dispute experience for each of the models in chapters four and five.[55]

## 3.5 USING THE DATA SET

This chapter has presented, in detail, the specifics of the data set and method used to test the hypotheses derived in chapter two. In addition to the specifics of the data I have collected, I provided details on how this data is a contribution to the larger set of data on international trade disputes and use of international legal bodies as well provided some limited evidence that the proposed relationship between previous experience and forum choice exists. This new, original data set provides a slew of benefits to the literature of international trade dispute resolution, learning, and international law. While the data itself provides a large contribution to the academic community, it also adds to the extant literature on forum shopping in international trade disputes through its use in the empirical examinations in the following chapters. In chapter four, I first assess the stumbling block effect of regional trade dispute settlement bodies by looking at previous experience as dispute initiation. Chapter five utilizes the second

[55] See Greene (2003, 719-723) and Kennedy (2008, 250-258) for more information, among others.

understanding of previous experience, which focuses on a specific subset of experience – the decisions issued at the regional forum.

## 4.0 FORUM SHOPPING, PREVIOUS DISPUTE EXPERIENCE, AND LEARNING CAPACITY

When confronting a difficult situation at the international realm, states are often presented with a variety of options to ease, resolve, or exacerbate the current situation. The focus of this project is a state's choice between available alternatives to address and/or resolve disputes associated with overt or opaque restrictions on trade. I examine two key questions associated with this choice: first, why a state makes a particular choice; and, second, why it makes that choice *over* another alternative. Specifically, I seek to explain why a state would choose to utilize a regional mechanism over a multilateral one. I have argued that the decision to select a regional dispute settlement mechanism to resolve these disputes is made by a state after evaluating available evidence, which allows the state to select an alternative that best minimizes costs while magnifying the potential benefits.

The quantity and quality of information available to a state to make this assessment is generated from its previous experiences in resolving these international trade disputes at the regional forum. This enables a regional dispute settlement mechanism to play a stumbling block role. I expect that a regional dispute settlement body behaves as a stumbling block because using that body leads to a greater likelihood that the regional alternative is used in the future *instead of* the multilateral alternative. Such a role emerges because a state learns from its previous experience at a regional forum, which makes the regional alternative less costly and characterized by less uncertainty, which makes it more attractive in the future. Previous experience increases the information available to states regarding how to minimize costs, maximize benefits, and litigate disputes at a particular forum; knowledge and expertise are built through previous experience. My first hypothesis is associated with this anticipated stumbling block role of regional trade dispute settlement bodies. An increase in previous regional experience is expected to be associated with an increase in the likelihood that a state utilizes a regional forum in the future.

I expect, however, that there is a conditional effect inherent in this relationship; the stumbling block role of regional trade dispute settlement bodies varies based on a state's learning capacity.

Specifically, my second hypothesis posits that the magnitude of the positive effect of previous regional dispute experience on future regional dispute initiation will increase as a state's learning capacity increases. Learning capacity is comprised of two parts: ability and incentive to gather information from experience, learn from it, and apply those lessons in future endeavors. The ability and incentive parts of learning capacity are determined by the characteristics of the state and the relationship between the disputants. A state's ability to learn is a function of the learning space, which is created by the divergence between expectations and outcomes. The learning space is influenced by the resource and capacity constraints faced by a state; diminished resources leads to a lower quality dispute resolution infrastructure, which provides more room for adaptation and improvement as a state learns. The ability component of learning capacity is measured as the state's level of development. Learning capacity is also a function of the state's incentive to learn from previous experience, which is theorized to be a function of the economic relationship between the disputing parties. A stronger dyadic relationship increases the incentive to learn and influences the interpretation and internalization of information gathered because disputes become potentially more costly, important, and/or frequent. I capture the relationship between the disputants using three measures: the reliance on dyadic exports in the subject area to total exports; the relative importance of dyadic exports in the subject area to GDP; and the economic power disparities in the dyad. Both incentive and ability are key components of learning capacity, which influence the effect of previous regional experience on the likelihood of future regional dispute initiation.

This chapter inspects the strength of my explanation of forum choice in international trade disputes. Utilizing the newly collected, original data set detailed in the previous chapter, I seek to demonstrate the importance of learning from the past – and the differential learning that occurs based on a state's learning capacity – on forum choice and, as a result, the stumbling block effect of regional dispute settlement bodies. Using data on disputes initiated at the dispute settlement bodies of the Andean Community (CAN), Central American Common Market (CACM), Common Market of the South (Mercosur), North American Free Trade Agreement (NAFTA), and the World Trade Organization (WTO)

between 1995 and 2010, I begin to empirically examine my theoretical expectations.[1] In this chapter, I examine the effect of overall dispute resolution experience, which ranges from use of the body for only consultation, investigatory, and/or dyadic discussion purposes to use of the forums for these reasons as well as to have the relevant legal body adjudicate the dispute.

Previous regional dispute experience is operationalized as the number of disputes initiated at a regional forum *against* the current potential complainant (state *i*) in the previous year. Recall that this is done in order to minimize potential selection biases. Since a complainant selects where and when a dispute is filed, measuring previous experience as a complainant at the relevant bodies would produce selection bias in my results that would hinder my ability to accurately assess my hypotheses and the proposed learning mechanism associated with the effect of previous experience on future forum choice. Through this data structure, I assess the effect of previous experience on the likelihood that state *i* initiates a dispute against state *j* at a regional dispute settlement forum in a particular subject area *s*, relative to the likelihood of initiating a dispute at the WTO dispute settlement body in that same subject area. The disputes are categorized as one of eight subject areas based on the harmonized system codes associated with the dispute and author defined coding rules.[2] Structuring my data in this manner also allows me to independently assess the effect within a regional dispute settlement body since there is no overlap in formal membership of these bodies[3] as well control for potential path dependence.[4] I find robust evidence that previous regional dispute experience – conditioned by learning capacity – increases the likelihood that a state initiates a regional dispute relative to a multilateral one.

[1] Recall from the discussion in the previous chapter that there is no overlap if formal membership in the dispute settlement bodies of these regional bodies.
[2] Five of these subject areas – agriculture, primary commodities, low-technology manufacturing, machinery/electrical, and miscellaneous – are determined by the harmonized systems codes associated with goods at the heart of the dispute while three subject areas – services, intellectual property, and general/unclear –capture those disputes that do not include an associated harmonized systems code or cover a wide array of products and are categorized by author defined coding rules.
[3] The full member states of the CAN across most of the years in the data set are: Bolivia, Colombia, Ecuador, Peru, and Venezuela. The full member states of the CACM are: Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua. The full member states of the Mercosur are: Argentina, Brazil, Paraguay, Uruguay. Venezuela became a full member of Mercosur in 2012, after formally leaving the Andean Community in 2006. The full member states of the NAFTA are: Canada, Mexico, and the United States.
[4] Refer to section 4.5 in this chapter.

In this chapter, I find extensive support for the stumbling block role of regional trade dispute settlement bodies. I do so by looking at a number of different measures of previous disputes and model specifications. I first investigate the plausibility of the proposed relationship between regional dispute settlement experience and future forum choices in international trade disputes by examining more parsimonious specifications. In this section, I utilize general models that look at the relationship at the country-year level, country-year-subject, and dyad-year-subject levels of analyses. In these models, I am able to demonstrate that the relationship between my key variables is a function of neither level of analysis nor model specification. The second section of this chapter provides my primary empirical results by refining these general models. I test my theoretical expectations by measuring previous regional dispute experience as the number of disputes initiated by state *j* against state *i* in subject area *s* in year *t-1*. This enables me to capture the dyadic influence of short-term previous experience for disputes within the same subject area. I also examine and discuss the differences in dyadic experiences in a specific subject area and across subject areas. I expect that a state will be able to better apply what it learns and make more accurate predictions in the future when looking to information gathered from previous regional dispute experiences within the same subject area relative to learning from disputes across subject areas. To accurately assess the stumbling block role of previous regional dispute experience, all models presented in this chapter are estimated with the "WTO Dispute Only" category of the dependent variable *Forum Choice* as the reference group in the model.[5]

The second and third sections assess the robustness of my results by utilizing different measures of previous regional dispute initiation experience. In the second set of empirical examinations, I address the potential divergence between the effects of immediate and cumulative learning. In this set of analyses, I vary the temporal understanding of previous experience, which allows me to test the short- vs. long-term effects of previous regional dispute initiation experience. Previous experience is measured as the total number of disputes initiated against state *i* by state *j* in subject area *s* in years *t-1* through *t-5*. In

[5] These models are not estimated with cubic splines. This is done because many of the models would not estimate when cubic splines and a "WTO Dispute" reference group were used. When comparing results of the models without cubic splines and those with, I find the same general relationship and significance levels for my key variables.

this section, I demonstrate that learning from previous regional dispute experience has both a short-term and cumulative effect on forum choice. My third set of tests expands the spatial component of previous experience; I assess my theoretical expectations using a count of all disputes initiated against state *i*. Through this measurement of previous experience, I am able to ascertain whether or not states learn and apply those lessons across different trade partners in disputes. In this section, I demonstrate that having a dispute initiated against a state in the previous year by any regional partner still generates a stumbling block effect of regional dispute settlement bodies. However, the effect is not as strong as the one seen using the dyadic measure.

For each of these measures of previous regional dispute experience, I first assess the effect of previous dyadic regional dispute experience without accounting for the effect when conditional on learning capacity. I then delve into the effect of previous regional dispute experience when conditional on each element of learning capacity. After presenting all of my results, I also consider the validity of alternative mechanisms for explaining the relationship between previous experience and forum choice. Specifically, I demonstrate that the positive relationship observed is not a function of the increasing returns and policy precedence established, i.e., the relationship is demonstrative of path dependence, nor is it simply due to the fact that the regional dispute alternative is the least costly *formal* dispute resolution alternative. Through this discussion, I provide confidence in the "learning-by-doing" mechanism proposed to explain patterns of regional dispute initiation behavior when an alternative exists at the WTO

As detailed in the previous chapter, I utilize a multinomial logit model to account for the competition between *k-1* forum choice alternatives.[6] The models in this chapter are an estimation of equation (1):

$$\text{Forum Choice}_{ijst} = \beta_1 \text{ Previous Regional Experience}_{ist-1} + \beta_2 \text{ Learning Capacity}_{i(j)t-1} + \beta_3 \text{ Previous Regional Experience}_{ist-1} \text{ X Learning Capacity}_{i(j)st-1} + \beta_4 \mathbf{X}_{ijst-1} + \beta_5 \mathbf{W}_{ijt-1} + \beta_6 \mathbf{Z}_{it-1} + \varepsilon \quad (1)$$

In addition to my measures of previous regional dispute initiation experience and learning capacity, I include dyadic, monadic, and time-invariant variables to account for alternative explanations

[6] Long (1997), 149-178. The categories in *Forum Choice*$_{ijst}$ that capture each of the forum choice alternatives are: no dispute initiated, only a regional dispute initiated, only a WTO dispute initiated, both regional and WTO disputes initiated.

for forum choice and the decision to initiate a dispute in each of the models in this chapter. I discuss the effect of each of these alternative explanations on forum choice in the final section of this chapter. I account for potential alternative avenues for learning by including variables that account for previous experiences at the WTO as a respondent or third party. While the exact measurement of the variable capturing the number of disputes initiated against the potential complainant at the WTO varies based on the measurement of its regional counterpart, across all models *# Third Party* $_{i\ t-1}$ is the number of disputes a state participates in as a third party at the WTO in the previous year. Beyond alternate source of information, economic characteristics can also influence the decision to initiate a dispute and where to bring that dispute. To account for this, I control for capacity constraints that can influence forum choice and the likelihood of using an international legal body to resolve a dispute via the natural logs of the GDP per capita of the potential complainant and respondent.

Another alternative explanation for forum choice and dispute initiation is derived from the relationships of the disputing parties. First, the dyadic trade relationships are expected to influence a state's trade policy preferences and precedent setting considerations, which are argued by Busch (2007) to have an effect on forum choice. This alternative explanation is accounted for by including measures of the importance of trade to the potential complainant in each of the models.[7] Power asymmetries are also included as a control variable based on the expectation that when the economic power of the members of the dyad is characterized by greater parity or the potential respondent has a disproportionate share of the economic power in the dyad, compliance and retaliatory considerations and concerns become important elements in the forum shopping decision undertaken by a state. Domestic audience costs and political institutions may also influence the ability of a state to pursue a dispute and/or where it seeks to resolve that dispute. I account for this by controlling for the level of democracy of the potential complainant and respondent, as measured by the state's Polity score.

Across all models, I also include control variables that account for retaliatory initiations and the role of the institution. I include a series of dichotomous measures to account for the measure of the

[7] These measures are *Ln Sector Exports* $_{ij\ s\ t-1}$ */ GDP* $_{i\ t-1}$, *Ln Sector Exports* $_{ij\ s\ t-1}$ */ Total Exports* $_{ij\ t-1}$, and Ln *Total Trade/GDP* $_{i\ t-1}$.

dependent variable in the previous year. This measure accounts for the potential argument that a regional dispute is initiated in the following year only as a means of retaliation by the potential complainant. This ensures that my primary explanatory variables account for the learning that is occurring. The variables *CAN, MERCOSUR,* and *CACM* are dichotomous measures capturing the dyad's membership in a particular regional organization. I look at the effect of the institutional facets, relative to membership in the North American Free Trade Agreement, to assess whether or not being a member of a particular organization has a strong explanatory effect on forum choice and/or dispute initiation in general. The specification of my model gives me confidence that I am accurately assessing the effect of previous regional dispute experience on the likelihood of future regional dispute experience, when it is conditional on a state's learning capacity.

## 4.1 Demonstrating the Plausibility of the Argument

Before proceeding to the full empirical analyses, I first use the data described above to run some simple empirical models to demonstrate the plausibility of the argument derived in chapter two and discussed above. These results provide some initial evidence that a relationship exists between previous regional dispute experience and future forum choice to resolve international trade disputes. Due to space considerations, these models are reported in appendix A. The first set of parsimonious models examine the influence of all regional disputes initiated against a potential complainant *i* by all other member states of the regional trade agreement on that state's decision to initiate a dispute at one or both of the available formal dispute resolution mechanisms. These models look simply at country-year relationships and account for neither the characteristics of nor relationship with the partner in the dispute. The second set of models utilizes the same data and empirical structure used in my primary empirical results; I assess the effect of previous dyadic regional experience on initiation of a dyadic dispute. In these models, I provide a set of results that limits the amount of variables included in the models.

The first set of parsimonious models, which examine dispute experience and initiation behavior at the country-year level, provide, somewhat limited support for the posited relationship between regional

dispute experiences in the previous year and the forum choice for dispute initiation in the current year. I find that previous regional dispute experience exhibits a positive and statistically significant relationship with the likelihood of initiating a regional dispute in the future, relative to the likelihood of initiating a dispute at the WTO, in only one of these models. The marginal effects of previous regional dispute experience, however, exhibit a positive and statistically significant coefficient across all models. Looking at the most general model, which looks at the effect of all regional dispute experience across all subject areas on a state's forum choice – i.e., the country-year model – an increase in the amount of previous regional dispute experience is associated with a 6.9% increase in the likelihood of initiating a regional dispute in the current year, relative to the likelihood of initiating a WTO dispute.[8] When examining the effect of all disputes initiated in a particular subject area – i.e., the country-year-subject area model – the magnitude of the marginal effects increase; these demonstrate that an increase in the number of disputes initiated by the other member states of the RTA against the potential complainant are associated with a 11.2% increase in the likelihood that the potential complainant initiates a regional dispute in the current year in that subject area, relative to the likelihood of initiating a dispute at the WTO. The same relationship holds when accounting for the conditioning effect of the state's level of development.[9]

When considering the conditional effect of previous regional dispute experience in these models, key variables fail to attain statistical significance at conventional levels in the model presented. However, the marginal effects of previous regional dispute experience continue to have a positive and statistically significant relationship with the likelihood of initiating a regional dispute in the current year. The more interesting results are observed when examining the marginal effects as a state's level of development varies, which is hypothesized to capture the ability component of learning capacity. While the marginal effects are positive and statistically significant across all levels of development, the marginal effects

[8] A model was also estimated including a variable to capture the temporal effects. The marginal effect associated with that model is 0.068. A model could not be estimated at the country-level that accounted for the potential conditioning effect of level of development.

[9] When all variables are at their means, an increase in the number of regional disputes initiated against the potential complainant is again associated with a 11.2% increase in the likelihood of initiating a regional dispute in the current year, relative to the likelihood of initiating a WTO dispute.

increase as the state's level of development increases.[10] This indicates that state with greater amounts of resources – i.e., at higher levels of development – are more likely to go regional as the amount of experience at that forum increases. Overall, the models examining general dispute initiation behavior do not overwhelmingly support my hypotheses. However, these results are not problematic and, in fact, provide plausibility to my contention that learning is the key explanatory factor in the patterns of use of regional and multilateral dispute resolution bodies. As will be discussed later in this chapter, an alternative explanation posits that the positive relationship between previous regional experience and future use of that body is a function of path dependence. For example, a state may be utilizing a regional dispute settlement body in the future because there are increasing returns for doing so with previous experience. However, as these results demonstrate, it is not overall experience that structures the dispute initiation behavior of a state. As a result, it is important to delve deeper and uncover the specifics of the interaction that lead to regional dispute initiation to uncover the true, underlying factors that influence forum shopping behavior and the stumbling block role of regional trade dispute settlement bodies.

As a first step in that endeavor, I examine the general relationship between previous regional dyadic dispute behavior and future dyadic dispute initiation patterns. The previous set of models has demonstrated that general dispute initiation patterns by a particular state are not compellingly tied to its broad regional dispute experience. Looking at models the incorporate the dyadic context allows for insight into the extent of the relationship between previous regional dyadic dispute experience and future forum choices in dyadic disputes. An observed relationship in more limited models would demonstrate that the dyadic context of the experience contributes to understanding forum shopping and patterns of use of regional dispute settlement bodies. This is an important finding toward understanding the stumbling block role of regional dispute settlement bodies because it will demonstrate that the context of the

[10] These results are not presented for space considerations. At the levels of GDP per capita used to calculate marginal effects figures below, an increase in number of regional disputes initiated against a state in the previous year is associated with 9.0%, 9.7%, 10.8%, 11.8%, 13.2%, 14.6%, and 15.0% increase in the likelihood of initiating a regional dispute in the current year, relative to the likelihood of initiating a WTO dispute.

experience matters, which will help to provide support for the premise that state learning is driving the relationship and not another mechanism.

These simple dyadic models are presented in appendix A.1. In these models, I find support for a positive relationship between dyadic previous regional dispute experience and future dyadic regional dispute initiation. Compared with the previous set of results, this indicates that certain experiences and pieces of information acquired through that experience are relevant when applied to a specific dyad; thus, the context of forum shopping is important. The first simplified model looks at the effect of different forms of experience at a regional body, the WTO, or as a third party to a dispute at the WTO when controlling for the available RTA. The second simplified model adds a few additional controls; I include the level of development of the potential complainant and respondent as well as a control for the type of experience in the previous year. The third simplified model uses this same specification but measures experience across subject areas. Finally, I estimate a simplified model that examines the conditional effect of previous regional dispute experience with this limited set of control variables. In nearly all of these models, an increase in the number of regional disputes initiated against a potential complainant is associated with an increase in the likelihood of a regional dispute being initiated in the current year, relative to the likelihood of initiating a dispute at the WTO.

The confidence in this relationship is only enhanced when examining the marginal effects of the amount of previous regional dispute experience across these models. Respectively, an increase in the amount of previous regional dispute initiated against the potential complainant by the potential respondent is associated with a 3.2%, 1.9%, 0.17%, and 2.3% increase in the likelihood of regional dispute initiation relative to the likelihood of WTO dispute initiation. In the simplified model examining the conditional effect of previous experience, I find that the marginal effects remain positive and statistically significant and that the effect decreases as level of development increases, which is dissimilar to the results observed when modeling the country-year effects.[11] These results provide insight to the

[11] These results are not presented for space considerations. At the levels of GDP per capita used to calculate marginal effects figures below, an increase in number of regional disputes initiated against a state by a particular regional partner in the previous

general trends associated with dyadic dispute experience and future dispute resolution behavior. Further, they provide support for the plausibility of the argument derived in chapter two. Overall, the results presented in this section indicate that there is a general relationship between previous experience and forum choice in international trade disputes. The extent and type of the effect varies based on the context; a stronger and more robust relationship exists when considering the intra-dyadic effect. Given that I have demonstrated the plausibility of my argument and the relationship between previous experience and forum choice, I now move on to delve deeper into understanding how, and the conditions under which, context matters and, as a result, provide support for my argument that states learn-by-doing and apply those lessons to future forum shopping endeavors.

## 4.2 The Effect of Dyadic Disputes on Forum Shopping Choices

In this section, I begin to examine the expected stumbling block role of regional dispute settlement mechanisms. The stumbling block effect of regional dispute settlement bodies originates from what states are able to learn through previous experience at a regional forum. I hypothesize that the stumbling block effect will be demonstrated by a positive relationship between previous regional dispute experience and the likelihood of future regional dispute initiation. To ascertain the extent of the stumbling block effect, I first examine the non-conditional effect of previous experience within the directed-dyad. Specifically, I analyze whether the number of regional disputes initiated against state *i* in the previous year by state *j* influences state *i*'s future forum choice in trade disputes with state *j*.

**Table 4.1: Influence of Previous Dyadic Regional Dispute Experience on Trade Dispute Forum Choice**

| | Model 1 | | | Model 2 | | | Model 3 | | |
|---|---|---|---|---|---|---|---|---|---|
| | No Dispute | Regional Dispute | Both Forums | No Dispute | Regional Dispute | Both Forums | No Dispute | RTA Dispute | Both Forums |
| # Regional Disputes $_{ijst-1}$ | 0.795* | 1.139** | 1.088*** | | | | -6.494*** | -5.142** | -1.833 |
| | (0.548) | (0.56) | (0.366) | | | | (2.44) | (2.482) | (1.915) |
| # Regional Disputes $_{ijt-1}$ | | | | 0.358 | 0.409* | 0.397* | | | |
| | | | | (0.282) | (0.29) | (0.283) | | | |

year is associated with 2.98%, 2.74%, 2.36%, 1.99%, 1.62%, 1.26%, and 1.16% increase in the likelihood of regional dispute initiation in the current year, relative to the likelihood of WTO dispute initiation.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| # Regional Disputes $_{iist-1}$ X Ln GDP pc $_{it-1}$ | | | | | | | 0.762*** | 0.647** | 0.247 |
| | | | | | | | (0.291) | (0.299) | (0.229) |
| # WTO Disputes $_{ijst-1}$ | -1.454** | -1.922*** | -20.18*** | -0.619** | -0.806*** | -2.275** | -1.758*** | -2.117*** | -19.802*** |
| | (0.767) | (0.539) | (0.947) | (0.287) | (0.284) | (1.023) | (0.744) | (0.518) | (0.867) |
| # Third Party | -0.009 | -0.066 | -0.054 | -0.001 | -0.051 | -0.018 | -0.008 | -0.066 | -0.036 |
| | (0.075) | (0.081) | (0.132) | (0.068) | (0.068) | (0.141) | (0.083) | (0.089) | (0.123) |
| Power | 0.685 | 0.61 | 1.965*** | 0.701 | 0.62 | 1.978*** | 0.9 | 0.82 | 2.216*** |
| | (0.991) | (0.983) | (0.842) | (0.778) | (0.772) | (0.65) | (1.026) | (1.02) | (0.876) |
| Ln GDP pc $_{it-1}$ | -1.322* | -1.507* | -2.353** | -1.601* | -1.740** | -2.548** | -1.589* | -1.730** | -2.514** |
| | (0.98) | (0.967) | (1.432) | (1.025) | (1.03) | (1.48) | (0.993) | (0.976) | (1.518) |
| Ln GDP pc $_{jt-1}$ | -2.159*** | -1.854*** | -2.193*** | -1.820*** | -1.538*** | -1.825*** | -2.061*** | -1.757*** | -2.280*** |
| | (0.662) | (0.655) | (0.731) | (0.513) | (0.506) | (0.65) | (0.682) | (0.675) | (0.808) |
| Ln Sector Exports $_{ij\ t-1}$/ GDP $_{i\ t-1}$ | -0.566** | -0.391 | 0.814*** | -0.990*** | -0.821** | 0.351 | -0.478* | -0.307 | 0.887*** |
| | (0.323) | (0.338) | (0.311) | (0.364) | (0.377) | (0.398) | (0.318) | (0.334) | (0.358) |
| Ln Total Trade/ GDP $_{i\ t-1}$ | 3.384** | 2.403* | 2.812** | 4.555** | 3.631* | 3.936** | 3.602** | 2.613* | 3.052** |
| | (1.728) | (1.792) | (1.362) | (2.472) | (2.517) | (2.048) | (1.772) | (1.835) | (1.611) |
| Sector Exports $_{ij\ t-1}$/ Total Exports $_{ij\ t-1}$ | 0.929*** | 1.246*** | -0.131 | 1.459*** | 1.811*** | 0.499 | 0.822*** | 1.142*** | -0.111 |
| | (0.323) | (0.361) | (0.389) | (0.427) | (0.455) | (0.456) | (0.315) | (0.353) | (0.385) |
| Polity 2 $_{it-1}$ | 0.385* | 0.318 | 0.908* | 0.479* | 0.417 | 0.961* | 0.415* | 0.347* | 0.929* |
| | (0.284) | (0.277) | (0.617) | (0.339) | (0.329) | (0.631) | (0.274) | (0.268) | (0.658) |
| Polity 2 $_{jt-1}$ | 0.905*** | 0.935*** | 0.591*** | 0.942*** | 0.978*** | 0.687*** | 0.859*** | 0.888*** | 0.515** |
| | (0.19) | (0.196) | (0.238) | (0.171) | (0.171) | (0.175) | (0.193) | (0.199) | (0.236) |
| RTA Dispute $_{ijst-1}$ | -1.503*** | -0.144 | 1.285*** | -1.953*** | -0.483 | 0.906** | -1.489*** | -0.152 | 1.544*** |
| | (0.586) | (0.545) | (0.402) | (0.425) | (0.444) | (0.395) | (0.578) | (0.533) | (0.434) |
| WTO Dispute $_{ijst-1}$ | -2.053*** | -0.611 | 1.473*** | -2.030*** | -0.65 | 1.316** | -2.189*** | -0.764 | 1.619*** |
| | (0.71) | (1.381) | (0.575) | (0.662) | (1.379) | (0.699) | (0.688) | (1.386) | (0.612) |
| Both Dispute $_{ijst-1}$ | -3.331*** | 0.01 | 0.802 | -3.378*** | -0.065 | 0.687 | -3.274*** | -0.044 | 0.638 |
| | (0.899) | (1.314) | (1.347) | (0.795) | (1.412) | (1.831) | (0.907) | (1.304) | (1.344) |
| CAN | 13.718*** | 14.287*** | -4.348** | 12.729*** | 13.302*** | -4.544** | 12.762*** | 13.297*** | -5.661*** |
| | (1.753) | (1.792) | (2.099) | (1.787) | (1.833) | (2.127) | (1.698) | (1.695) | (2.363) |
| MERC | -0.469 | 0.338 | -2.670* | -1.459* | -0.751 | -3.858** | -0.229 | 0.542 | -3.087** |
| | (0.852) | (1.031) | (1.624) | (0.938) | (1.03) | (1.679) | (0.854) | (1.013) | (1.818) |
| CACM | 8.457** | 7.649** | -10.35*** | 6.973** | 6.110* | -11.04*** | 7.262** | 6.466** | -11.551*** |
| | (3.68) | (3.708) | (3.561) | (3.92) | (3.986) | (3.847) | (3.762) | (3.794) | (3.81) |
| constant | 10.474 | 13.609 | 32.761*** | 0.396 | 3.042 | 21.570* | 12.601 | 15.407* | 36.172*** |
| | (11.236) | (10.876) | (13.034) | (11.411) | (11.134) | (13.292) | (11.302) | (10.7996) | (13.353) |
| N | | 3661 | | | 3661 | | | 3661 | |
| Pseudo $R^2$ | | 0.306 | | | 0.302 | | | 0.309 | |
| Log Pseudolikelihood | | -958.427 | | | -963.118 | | | -954.352 | |

Note: Robust standard errors in parentheses. P values are calculated for a one-tailed hypothesis test. Observations clustered by dyad *p < 0.10, **p < 0.05, ***p < 0.01

When modeling the non-conditional effect of previous regional dyadic disputes on the likelihood of regional dispute initiation, which is reported in in models 1 and 2 in table 4.1, I find that regional dispute experience has a strong and positive effect on the likelihood of initiating a regional dispute in the future, relative to the likelihood of initiating a dispute only at the WTO. The relationship observed in the coefficients associated with the unconditional effect of previous regional dispute experience holds when looking at the count of disputes initiated in a particular subject area – captured in model 1 – and for the count across subject areas – captured in model 2.[12] This result provides support for stumbling block effect of regional dispute settlement bodies. Further support is revealed when examining the marginal effects associated with these models. For both models, the marginal effects show that an increase in previous regional dispute experience is associated with an increase in the on the likelihood of regional dispute initiation in the following year.[13]

Previous regional dispute experience does not only predict future regional dispute initiation; this form of past dispute resolution behavior is also associated with the alternative dispute resolution outcomes. An increase in the number of disputes initiated against the potential complainant is associated with an increase in the likelihood that no dispute is initiated, relative to the likelihood that a WTO dispute only is initiated, when using the count of disputes initiated in the same subject area. A positive relationship is also observed when predicting the likelihood of initiating a dispute at both the WTO and a regional forum, relative to only WTO, when considering the effect of the number of disputes initiated within the same subject area and across subject areas. The results from both of these models provide evidence that regional dispute settlement bodies behave as stumbling blocks; previously using a regional body increases the likelihood of initiating a dispute at the regional bodies *instead* of the WTO dispute settlement body in the future. To more fully understand the influence of previous regional dispute experience on forum choice, I next assess my hypotheses associated with the effect of previous

[12] Recall that I report these models without the cubic polynomials. The results are similar when utilizing the cubic polynomials I have coded; these models can be found in tables in appendix A.1.

[13] Specifically, an increase in the number of previous regional disputes initiated against the potential complainant by the potential respondent is associated with a 1.52% increase in the likelihood of initiating a trade dispute at a regional body relative to the likelihood of WTO dispute initiation when examining the effect within the same subject area in model 1 and a 0.23% increase in the likelihood of regional dispute initiation when looking at the effect of disputes across subject areas in model 2.

experience at a regional dispute settlement body on future forum choice when conditional on learning capacity.

### 4.2.1 CONDITIONAL EFFECT OF PREVIOUS REGIONAL DISPUTE EXPERIENCE

The ability to learn varies; each entity has differing capabilities to gather, interpret, and internalize the information available. The previous section assumed that all states are able to learn from the information provided through previous experience at the same rate and in the same way. By assuming that the learning processes are homogenous across different states, the analysis above presents an incomplete picture of state learning from previous regional experience and future forum choice. State learning from previous regional experience is expected to vary because of key differences in a state's learning capacity. A state's learning capacity impacts both the amount of learning that occurs from previous experience as well as the stumbling block effect of regional dispute settlement bodies. My second hypothesis posits that the magnitude of positive effect of previous regional dispute experience on the likelihood of regional dispute initiation in the following year increases as learning capacity increases.

As previously established, there are two key parts of learning capacity: learning capacity is a function of the state's ability and incentive to learn. The first component of learning capacity, ability, is tied to the complainant's level of development.[14] The amount of monetary and other quantifiable resources available will influence the quality of the dispute resolution infrastructure initially established. A higher quality infrastructure allows a state to make more accurate expectations, which decreases the need to learn from previous dispute experience. I expect that states with a lower level of development have a less developed dispute resolution infrastructure which thus allows this group of states to have a greater ability to learn. States with a lower level of development will need to cull a greater amount of information from previous experiences since there is likely a greater divergence between expectations and outcomes. The second component of learning capacity, which influences a state's perspective of the importance of learning and the information acquired in these previous disputes, is related to the economic

[14] This is operationalized as the natural log of the potential complainant's GDP per capita in the previous year.

and trade relationships between the members of the dyad. These relationships influence the incentives to expend the necessary time and resources to learn from the information provided by previous disputes.[15] To accurately address the conditional effect of previous regional dispute experience, I estimate four distinct models. Each model includes an interaction between previous regional dispute experience and a component measure of learning capacity. The effect of previous experience, when conditional on the ability component of learning capacity, is reported in table 4.1 and, when conditional on the incentive component of learning capacity, in table 4.2.[16]

In model 3, I begin to find evidence of how the effect of previous regional dispute experience is conditioned by learning capacity. In this model, I interact the number of previous regional disputes with the natural log of GDP per capita, which captures the learning ability of a potential complainant. Using this measure of learning capacity, the coefficients associated with both the component and interaction terms are statistically significantly related to the likelihood of regional dispute initiation. In this model, the component term associated with the number of regional disputes initiated against a potential complainant in the prior year in a particular subject area exhibits a negative relationship with the likelihood of initiating a regional dispute, relative to a multilateral one. The interaction term, however, is positively associated with the likelihood of initiating a regional dispute in the following year. These relationships hold when predicting the likelihood that no dispute is initiated.

**Table 4.2: Influence of Previous Dyadic Regional Dispute Experience on Trade Dispute Forum Choice, Conditional on Dyadic Relationship**

| | Model 4 | | | Model 5 | | | Model 6 | | |
|---|---|---|---|---|---|---|---|---|---|
| | No Dispute | RTA Dispute | Both Forums | No Dispute | Regional Dispute | Both Forums | No Dispute | Regional Dispute | Both Forums |
| # Regional Disputes $_{ijst-1}$ | 2.001* | 2.316** | 0.661 | 0.044 | 0.398 | -2.927 | 1.205 | 1.528* | 1.461** |
| | (1.287) | (1.298) | (1.172) | (5.537) | (5.373) | (5.613) | (0.983) | (0.994) | (0.791) |

[15] Specifically, I measure the economic relationship between the members of the dyad as the importance of exports in the subject area and the disparity in economic power. The first is operationalized as the natural log of exports from the potential complainant to the potential respondent in a subject area over total dyadic exports in the previous year and the natural log of exports from the potential complainant to the potential respondent in a subject area over the potential complainant's GDP in the previous year. The second, economic power disparities, is operationalized as the natural log of the sum of the disputants GDPs over the complainant's GDP in the previous year.

[16] The models it table 4.2 are re-estimated using the count of previous regional disputes across subject areas in tables in appendix A.1.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| # Regional Disputes $_{iist-1}$ X Sector Exports $_{ij\ t-1}$/ Total Exports $_{ij\ t-1}$ | 0.530* | 0.509* | -0.179 | | | | | | |
| | (0.328) | (0.33) | (0.291) | | | | | | |
| # Regional Disputes $_{iist-1}$ X Sector Exports $_{ij\ t-1}$/ GDP $_{i\ t-1}$ | | | | -0.06 | -0.06 | -0.295 | | | |
| | | | | (0.475) | (0.464) | (0.481) | | | |
| # Regional Disputes $_{iist-1}$ X Power $_{iit-1}$ | | | | | | | 0.447 | 0.428 | 0.399 |
| | | | | | | | (0.424) | (0.42) | (0.388) |
| # WTO Disputes $_{iist-1}$ | -1.594** | -2.064*** | -18.65*** | -1.448** | -1.920*** | -18.58*** | -1.606** | -2.069*** | -19.31*** |
| | (0.86) | (0.601) | (1.081) | (0.747) | (0.522) | (0.933) | (0.929) | (0.607) | (1.035) |
| # Third Party | -0.016 | -0.074 | -0.069 | -0.008 | -0.066 | -0.059 | -0.013 | -0.07 | -0.056 |
| | (0.078) | (0.084) | (0.136) | (0.075) | (0.082) | (0.128) | (0.078) | (0.084) | (0.133) |
| Power | 0.813 | 0.738 | 2.026** | 0.677 | 0.603 | 1.902** | 0.631 | 0.564 | 1.959** |
| | (1.056) | (1.05) | (1.012) | (0.963) | (0.955) | (0.829) | (1.026) | (1.018) | (0.98) |
| Ln GDP pc $_{it-1}$ | -1.396* | -1.581* | -2.534* | -1.325* | -1.511* | -2.330* | -1.432* | -1.620* | -2.473** |
| | (1.006) | (0.991) | (1.635) | (0.984) | (0.971) | (1.524) | (1.02) | (0.998) | (1.447) |
| Ln GDP pc $_{jt-1}$ | -2.116*** | -1.810*** | -2.336*** | -2.155*** | -1.848*** | -2.363*** | -2.197*** | -1.893*** | -2.224*** |
| | (0.659) | (0.651) | (0.797) | (0.661) | (0.654) | (0.746) | (0.678) | (0.667) | (0.747) |
| Ln Sector Exports $_{ij\ t-1}$/ GDP $_{i\ t-1}$ | -0.503* | -0.328 | 0.772** | -0.571** | -0.397 | 0.853** | -0.590** | -0.415 | 0.806*** |
| | (0.328) | (0.344) | (0.384) | (0.323) | (0.338) | (0.376) | (0.336) | (0.351) | (0.345) |
| Ln Total Trade/ GDP $_{i\ t-1}$ | 3.506** | 2.529* | 2.755* | 3.389** | 2.414* | 2.602** | 3.435** | 2.453* | 2.877** |
| | (1.813) | (1.879) | (1.744) | (1.699) | (1.759) | (1.534) | (1.753) | (1.829) | (1.498) |
| Sector Exports $_{ij\ t-1}$/ Total Exports $_{ij\ t-1}$ | 0.786*** | 1.106*** | 0.184 | 0.935*** | 1.252*** | -0.067 | 0.947*** | 1.263*** | -0.124 |
| | (0.313) | (0.36) | (0.413) | (0.323) | (0.364) | (0.421) | (0.336) | (0.376) | (0.417) |
| Polity 2 $_{it-1}$ | 0.387* | 0.32 | 0.951 | 0.384* | 0.317 | 0.903* | 0.421* | 0.353* | 0.940* |
| | (0.279) | (0.271) | (0.749) | (0.286) | (0.279) | (0.661) | (0.273) | (0.267) | (0.587) |
| Polity 2 $_{jt-1}$ | 0.877*** | 0.908*** | 0.551*** | 0.909*** | 0.939*** | 0.640*** | 0.921*** | 0.951*** | 0.5996*** |
| | (0.187) | (0.193) | (0.228) | (0.197) | (0.204) | (0.22) | (0.189) | (0.196) | (0.2505) |
| RTA Dispute $_{iist-1}$ | -1.535*** | -0.18 | 1.708*** | -1.519*** | -0.164 | 1.378*** | -1.533*** | -0.172 | 1.261*** |
| | (0.566) | (0.531) | (0.515) | (0.568) | (0.532) | (0.376) | (0.585) | (0.55) | (0.355) |
| WTO Dispute $_{iist-1}$ | -2.016*** | -0.585 | 1.792*** | -2.071*** | -0.632 | 1.487*** | -2.144*** | -0.704 | 1.392** |
| | (0.723) | (1.406) | (0.755) | (0.781) | (1.423) | (0.609) | (0.786) | (1.445) | (0.605) |
| Both Dispute $_{iist-1}$ | -3.316*** | 0.022 | 0.971 | -3.318*** | 0.017 | 0.784 | -3.317*** | 0.024 | 0.809 |
| | (0.907) | (1.334) | (1.341) | (0.892) | (1.317) | (1.346) | (0.907) | (1.293) | (1.33) |
| CAN | 12.703*** | 13.282*** | -5.516** | 12.848*** | 13.423*** | -4.433** | 12.713*** | 13.271*** | -4.538** |
| | (1.725) | (1.718) | (2.417) | (1.643) | (1.674) | (2.031) | (1.878) | (1.838) | (2.249) |
| MERC | -0.34 | 0.472 | -3.600* | -0.477 | 0.335 | -2.921** | -0.626 | 0.172 | -2.849** |
| | (0.809) | (0.984) | (2.199) | (0.853) | (1.024) | (1.693) | (0.878) | (1.036) | (1.618) |
| CACM | 7.383** | 6.579** | -11.39*** | 7.437** | 6.634** | -10.56*** | 7.201** | 6.379** | -10.78*** |
| | (3.69) | (3.722) | (3.865) | (3.632) | (3.675) | (3.649) | (3.786) | (3.799) | (3.741) |
| constant | 11.205 | 14.314* | 36.289*** | 10.358 | 13.444 | 35.225*** | 11.029 | 14.229* | 33.620*** |
| | (11.323) | (10.933) | (13.306) | (11.183) | (10.832) | (12.988) | (11.351) | (10.95) | (12.95) |
| N | | 3661 | | | 3661 | | | 3661 | |
| Pseudo $R^2$ | | 0.308 | | | 0.306 | | | 0.306 | |
| Log Pseudolikelihood | | -954.656 | | | -957.282 | | | -957.958 | |

Note: Robust standard errors in parentheses. P values are calculated for a one-tailed hypothesis test. Observations clustered by dyad *p < 0.10, **p < 0.05, ***p < 0.01

As explained above, I expect that the economic relationship between the members of the dyad will change the preferences of the potential complainant to learn from previous regional dispute experience. Incentive to learn increases when a state perceives the relationship with the partner to be of greater value, the initiation of a trade disputes is more likely, the cost of a trade dispute is expected to be higher, and/or compliance is expected to be more difficult to attain. As incentive to learn increases, the amount learned from each experience at a regional dispute settlement body is expected to increase, which will result in a larger observed marginal effect of previous regional dispute experience. This expectation is partial confirmed in the results in table 4.2; in these models, a positive relationship is observed for the component and interaction terms associated with previous regional dispute experience and the likelihood of future regional dispute initiation, when statistically significant.

Examining the marginal effects of previous regional dispute experience associated with each of these models provides the most accurate understanding of the relationship between these key variables and forum choice. The results in these marginal effects provide further support my first hypothesis, which posits that an increase in the number of prior regional dispute experiences is associated with an increase in the likelihood of initiating a regional dispute. These marginal effects also support my proposition that a stumbling block effect exists for regional dispute settlement bodies. When all variables are held at their means, the marginal effects associated with each of the models demonstrate the same positive and statistically significant relationship. The magnitude of this relationship remains similar across the model in tables 4.1 and 4.2; respectively, an increase in the number of disputes initiated against the potential complainant in the previous year in the same subject area is associated with a 1.5%, 1.91%, 1.63%, 1.56% and 1.51% increase in the likelihood of initiating a regional dispute, relative to a multilateral dispute, respectively.[17]

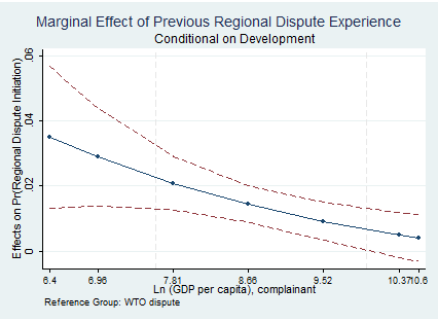
I am also able to garner support for my second hypothesis, which expects that the effect of previous regional dispute experience to vary based on learning capacity. Specifically, my second hypothesis states that the marginal effect of previous experience will increase as learning capacity

[17] These conditional marginal effects are reported in tables in appendix A.1.

increases. I find support for this expectation across the different measures capturing learning capacity. The first measure used to proxy learning capacity – the potential complainant's level of development – is expected to be inversely related to learning capacity. As the level of development increases, the baseline quality of a state's dispute resolution infrastructure and its ability to generate accurate expectations of the outcomes associated with use of each forum also increases, which decreases the potential space for learning to occur. As a result, states at lower levels of development have greater room to learn and improve their infrastructure and the accuracy of their expectations from previous regional dispute experience. Based on this expectation, I expect to see the marginal effect of previous experience decrease as level of development increases.

This is exactly what is seen in the marginal effects associated with model 3, which are shown in figure 4.1.[18] The conditional marginal effects of previous regional dispute experience are positive and statistically significant at all levels of development except the very highest level. Further, as the level of development increases, the size of the conditional marginal effects decreases. At the lowest level of development an increase in the number of previous regional disputes is associated with a 3.49% increase in the likelihood that a dispute is initiated regionally only, relative to multilaterally only, in the following year. At the mean of the level of development, an increase in the number of previous regional disputes is associated with a 2.09% increase in the likelihood of regional dispute initiation. The marginal effects decrease to 1.44% and 0.92% at one and two standard deviations, respectively, above the mean level of development.

**Figure 4.1: Marginal Effect of Previous Regional Dispute Experience, As Level of Development Increases**




[18] These marginal effects are also reported in tables in Appendix A.1.

Given the difficulties faced by developing countries in dispute resolution endeavors at the multilateral level, it is important to contextualize this finding. Specifically, this finding must be examined with knowledge of which states are the ones that reap the benefits of a greater amount of previous regional dispute experience. To provide context to these results, I categorize the countries included in the data set as one of three types: developed, developing, and less-developed, which is reported in table 4.3.[19] These categorizations are also represented in figure 4.1; I provide reference lines to demonstrate the different grouping in order to contextualize my results and demonstrate that developing countries reap the greatest benefits from previous dispute experience at a regional forum.

**Table 4.3: Development Categorizations**

**Developed (High-Income) Countries**

| | *Minimum Ln (GPD pc)* | *Mean Ln (GPD pc)* | *Maximum Ln (GPD pc)* |
|---|---|---|---|
| Canada | 9.893 | 10.063 | 10.173 |
| United States | 10.297 | 10.459 | 10.564 |

**Upper-level Developing (Middle-Income) Countries**

| | *Minimum Ln (GPD pc)* | *Mean Ln (GPD pc)* | *Maximum Ln (GPD pc)* |
|---|---|---|---|
| Argentina | 8.627 | 8.907 | 9.283 |
| Brazil | 8.028 | 8.21 | 8.455 |
| Colombia | 7.592 | 7.818 | 8.082 |
| Costa Rica | 7.914 | 8.222 | 8.556 |
| Mexico | 8.483 | 8.645 | 8.754 |
| Peru | 7.395 | 7.649 | 8.065 |
| Venezuela | 8.286 | 8.502 | 8.594 |
| Uruguay | 8.401 | 8.734 | 9.136 |

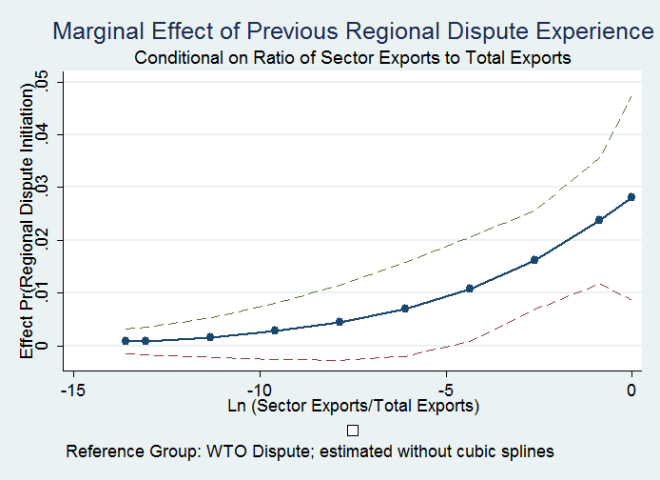
**Lower-level Developing (Lower-Income) Countries**

| | *Minimum Ln (GPD pc)* | *Mean Ln (GPD pc)* | *Maximum Ln (GPD pc)* |
|---|---|---|---|
| Bolivia | 6.724 | 6.877 | 7.117 |
| Ecuador | 7.124 | 7.230 | 7.455 |
| El Salvador | 7.311 | 7.584 | 7.875 |
| Guatemala | 7.225 | 7.384 | 7.546 |
| Honduras | 6.927 | 7.051 | 7.273 |
| Nicaragua | 6.454 | 6.668 | 6.912 |
| Paraguay | 7.160 | 7.238 | 7.391 |

[19] These categorizations are based on the average of the natural log of the state's GDP per capita as well as income classifications made by the World Bank in the World Development indicators. The average GDP per capita of the developed countries is greater than 10. The average GDP per capita of the upper-level developing countries is between 7.6 and 10. The average GDP per capita of the lower-level developing countries is less than 7.6.

I find further support for my expectations regarding the positive and conditional effect of previous regional dispute experience when looking to the measures associated with the dyadic relationship component of learning capacity. These measures, which capture the importance of the dispute to the state and thus the importance of learning from it, are: the ratio of exports in a subject areas to total exports for the dyad; the ratio of exports in the particular subject area for the dyad over the potential complainant's GDP; and the sum of the dyad's GDPs over the complainant's GDP. The first two of these measures, which capture the importance of the dyadic trade relationship to the potential complainant, are expected to be positively associated with learning capacity. As the importance of trade with the other member of the dyad increases for the complainant, its incentives to gather, interpret, and internalize information from previous experience increase. Increasing marginal effects as these ratios increase would provide support for my second hypothesis.

**Figure 4.2: Marginal Effect of Previous Regional Dispute Experience, As Ratio of Sector Exports to Total Exports Increases**

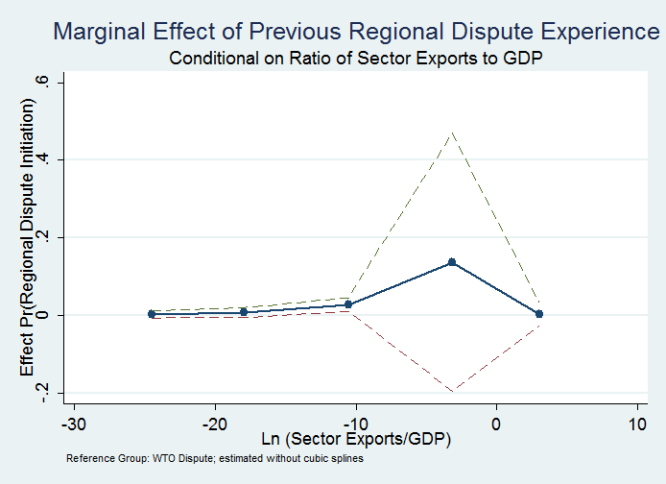



When learning capacity is measured as the ratio of sector exports to total exports, the conditional marginal effects of the number of previous regional disputes initiated, which are found in figure 4.2, again exhibit a positive sign and increase as learning capacity increases.[20] Unlike the marginal effects in figure 4.1, the marginal effects are only able to attain statistical significance at middle to higher levels of this measure of learning capacity. More importantly, as a potential complainant's dependence on exports to

[20] These marginal effects are also reported in tables in Appendix A.1.

the potential respondent in that subject area increases – which correspond to increasing levels of learning capacity - the value of these marginal effects also increases. The effect of an increase in the amount of previous regional dispute initiation experience increases the likelihood of initiating a regional dispute in the future by 0.69%, 1.63%, and 2.80% as the dependence on dyadic exports in a subject area relative to all dyadic exports increases.[21]

**Figure 4.3: Marginal Effect of Previous Regional Dispute Experience, As Sector Exports to GDP Increases**

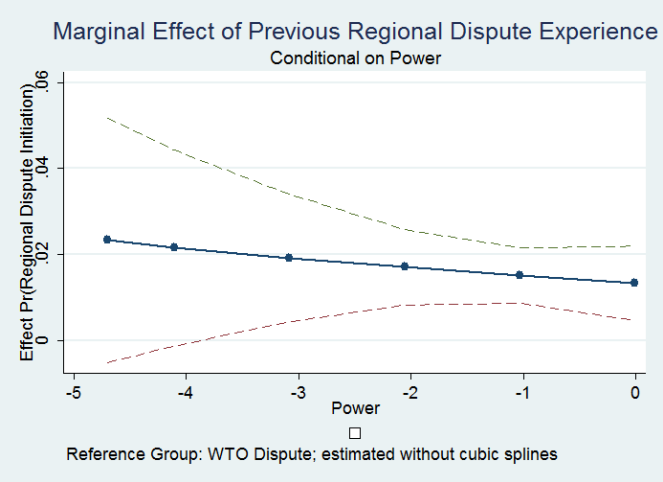



Based on my expectations, the marginal effects of previous dispute experience should exhibit the same relationship as the ratio of sector exports to GDP increases. Learning capacity is expected to increase as this ratio increases because a state will find it increasingly important to enhance the quality of its dispute resolution infrastructure and learn as much as possible from each previous dispute experience. Looking to the marginal effects associated with model 5, represented in figure 4.3, I find some support for my hypotheses.[22] Again, the marginal effects exhibit a positive sign; previous regional dispute experience increases the likelihood of utilizing the regional forum in future disputes. While the previous measures of learning capacity demonstrated a relationship wholly consistent with expectations associated with hypothesis 2, I fail to find the same support with this measure of learning capacity. In this case, I find that the conditional marginal effects of the number of previous regional dyadic disputes initiated are only

[21] These marginal effects are calculated at two standard deviations below the mean, the mean, and the maximum levels of the ratio of sector exports to total exports, respectively.
[22] These marginal effects are also reported in tables in Appendix A.1.

statistically significant at the mean of the ratio of sector exports to GDP. For countries at the mean level of the dependence of subject area dyadic exports to the overall economy, an increase in the number of disputes initiated against the potential complainant by the other member of the dyad at the regional forum in subject area *s* is associated with a 2.8% increase in the likelihood of initiating a regional dispute in the following year, relative to initiating a multilateral dispute. This result may be observed because learning capacity does not increase at a linear rate for this measure as expected. Instead, learning capacity may be highest at the mean level. At the highest levels of this ratio, a state may be unwilling to learn from its previous experience. If the potential complainant is very dependent on the other member of the dyad for its economic health, the incentive may move from learning, improving its expectations, and improving its dispute resolution infrastructure to ensuring very little disruption in trade.

**Figure 4.4: Marginal Effect of Previous Regional Dispute Experience, As *Power* Increases**




Unlike the previous two measures of the incentive component of learning capacity, I expect that the economic power disparities in the dyad are inversely related to learning capacity. When the disparity in economic power is high and in favor of the potential respondent – i.e., the value of $Power_{ij\ t-1}$ is at its lower levels – the potential complainant has an increased incentive and willingness to expend resources to learn from regional disputes initiated in the past in an effort to increase its dispute resolution infrastructure, overcome its limitations, and select the dispute resolution forum that minimize costs while maximizing benefits. As a result, I expect that, when conditional on $Power_{ij\ t-1}$, the conditional marginal

effects of this measure of previous experience will be positive and that the magnitude will decrease as the economic power of the potential complainant increases in the dyad. These conditional marginal effects, which are found in figure 4.4, provide overwhelming support for my expectations associated with hypotheses 1 and 2.[23] For all levels of economic disparity in the dyad, the marginal effects demonstrate that an increase in the number regional disputes initiated against the potential complainant in the previous year in the subject area *s* by the potential respondent is associated with an increase in the likelihood that a dispute is initiated in that same subject area by the relevant parties. Further, the marginal effects are attenuated as the potential complainant becomes relatively more economically powerful, i.e., as the value of $Power_{ij\ t-1}$ increases, which is in line with my expectations. At the extremes, where there is great disparity in economic power in the dyad, I find that an increase in the number of disputes initiated in the previous year is associated with a 2.3% increase in the likelihood that a regional dispute is initiated in the following year when this disparity favors the potential respondent and 1.3% increase when the disparity favors the potential complainant. When there is greater parity in the economic size of the disputants – i.e., at the mean level of $Power_{ij\ t-1}$ – an increase in the number of disputes initiated is associated with a 1.5% increase in the likelihood that only a regional dispute is initiated in the following year in the same subject area, relative to the likelihood that only a WTO dispute is initiated.

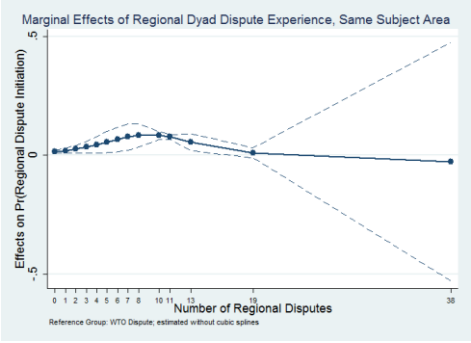
A state, however, is not limited to assessing previous experience only from disputes dealing with issues in the same subject area. To assess the effect of learning from all dyadic experiences, I re-estimate the models in tables 4.1 and 4.2 to capture the effect of the number of previous disputes initiated across all subject areas.[24] These models are reported in appendix A.1. Across these models, the component and interaction terms are rarely statistically significantly related to the likelihood of regional dispute initiation in the future. When learning capacity is measured as the ratio of dyadic exports in a particular subject area over total dyadic exports, the interaction term exhibits a negative and statistical significant relationship with both the likelihood of dispute initiation at only the regional body as well as at both the

[23] These conditional marginal effects are also reported in tables in Appendix A.1.
[24] In these re-estimations, I use the count of disputes initiated against the potential complainant by the potential respondent in the previous year across all subject areas. This term is also used in model 2 in table 4.1.

regional and multilateral forums. For the operationalization of learning capacity capturing the economic power disparities in the dyad – $Power_{ij\,t-1}$ – I find that while the interaction terms fails to attain statistical significance at conventional levels for all outcomes of interest the coefficients associated with the component terms associated with the number of regional disputes initiated in the previous year across subject areas is statistically significantly associated with the likelihood of initiating a regional only and regional and multilateral dispute, relative to the likelihood of initiating only a WTO dispute. When the economic power relationship is fully skewed in favor of the potential respondent, an increase in the number of previous regional disputes increases the likelihood of initiating a regional dispute, relative to a multilateral one, in the following year, which is consistent with my expectations.

Again, it is important to examine the marginal effects of increasing amounts of regional disputes initiated to garner a better understanding of the influence of previous experience across subject areas. The relationships exhibited in these marginal effects exhibit a number of similarities with those in figure 4.1 through 4.4. Again, the conditional marginal effects demonstrate that an increase in the number of disputes initiated across subject areas is associated with an increase in the likelihood that a regional dispute is initiated in the following year, relative to the likelihood that a WTO dispute is filed. This relationship holds for each of the measures of learning capacity that conditions the effect of previous experience. Again, the size of the marginal effects increases as each of the measures of learning capacity increases. Although the expected relationships hold, the effects are smaller than those associated with previous dispute initiation experience in a particular subject area.

**Figure 4.5: Marginal Effect of Previous Regional Dispute Experience of Each Additional Dispute, Same Subject Area**



The discussion thus far has focused on the effect of previous regional dispute experience as a state's learning capacity varies. These analyses have provided support for both hypotheses 1 and 2, which posit the stumbling block effect of regional dispute settlement body experience and its conditional effect. However, I also expect that the effect of previous regional dispute experience on the likelihood of initiating a regional dispute in the future may be influenced by the *amount* of experience a state has acquired. I now turn my attention to testing my third hypothesis that posits that there are diminishing returns to each additional previous experience after a certain point; the resource costs associated with a large number of disputes may also limit the ability to learn. I examine the returns on each additional regional dispute settlement experience in figure 4.5. These conditional marginal effects of the number of regional disputes initiated against a potential complainant exhibit a non-linear relationship as the number of previous regional dyadic dispute increases.[25] This indicates that there are decreasing marginal returns associated with each additional dispute at higher levels of experience, which is in line with my expectation in hypothesis 3. A non-linear marginal effect demonstrates that previous regional dispute experience has an increasing stumbling block effect until a certain point. After that point other factors, including the increasing relative cost of disputes, influence the ability of previous regional dispute experience to have an effect on learning, forum choice, and, as a result, the stumbling block effect of regional dispute settlement bodies. The same trend is apparent when examining the effects of increasing amounts of previous dispute initiation experience when conditional on learning capacity as well as when using the measure of disputes initiated across all subject areas.[26] Overall, I find that previous regional experience increases the likelihood of utilizing the regional forum in future trade disputes but that the extent of the effect varies based on experience and a state's learning capacity.

[25] These marginal effects are based on the subject-specific and unconditional specification in model 1.
[26] These are reported in Appendix B.1. The effect of increasing amounts of previous experience across subject areas when not conditional on learning capacity is represented in figure B.1.1. The effect of increasing amounts of experience when conditional on each of the measures of learning capacity – level of development, the ratio of exports in a subject area to total exports, the ratio of subject area exports to GDP, and economic power disparities – are represented in figure B.1.2.

### 4.2.2 ILLUSTRATIVE EVIDENCE: COLOMBIA AND VENEZUELA AT THE ANDEAN COMMUNITY

Looking at the data, there are a number of examples where there is the potential for learning to occur. For example, Colombia and Venezuela had the potential to learn about each other and resolve their disputes at the Andean Community following the five disputes initiated by Colombia against Venezuela in 2000.[27] Each of these five disputes – which all involved agricultural products – gave Venezuela experience on dispute resolution within two parts of the Andean Community dispute resolution system. In the Andean Community, the General Secretariat can be used alone as an investigatory authority to determine whether restrictive practices have been instituted or in conjunction with the Andean Court of Justice as part of establishing non-compliance with obligations as a member state of the Community. Three of these disputes initiated against Venezuela in 2000 used the dispute resolution mechanism for the former purpose. These disputes involved investigations requested by Colombia and conducted by the General Secretariat on various agricultural products, including potatoes, animal products, and corn, among other goods. In the investigations before the General Secretariat, Venezuela supported its contested policies by pointing out its applicability only to states outside of the Andean Community (SG-RG-33), as a means to gather information about trade flows (SG-RG-34), and in order to comply with domestic regulations (SG-RG-40). In two of these three investigations, the General Secretariat found Colombia's claims unfounded or not applicable. However, in the third – a tax dispute dealing with animal products, vegetables, and intermediate farming and agricultural products (SG-RG-34) – the General Secretariat found the Venezuelan practice to be a restriction of trade and thus a violation of its obligations as a member state of the Andean Community.

The final two disputes initiated in 2000 served the latter purpose. Both the General Secretariat and the Andean Court of Justice were used to establish how Venezuela's practices were compliant or non-

[27] Quotas and import licenses for sugar, milk, and yellow maize (SG-RG-33), Single Register of Importers for imports of animal products, vegetable and agricultural inputs originating in the subregion (SG-RG-34), Confiscation of a shipment of potatoes from Colombia (SG-RG-40), Implementation of a system of quotas or import licensing and quota sugar originating in the subregion (TJCA 73-AI-00), Implementation of a system of quotas or import licensing and quota sugar originating in the subregion (TJCA 80-AI-00). These decisions are available for download from the IDATD (2012).

compliant with the rules of the community (73-AI-2000 and 80-AI-2000). Both of the disputes that were heard before the Court of Justice dealt with quotas or import licensing in sugar. Based on a number of different facets of the agreements of the Andean Community,[28] Colombia argued that the sugar measure implemented by Venezuela was a restriction to trade. In both, the investigations undertaken by the Secretary General found that the Venezuelan practice was indeed non-compliant with its obligations as a member state of the Andean Community, as alleged by Colombia.

In the following year, Venezuela requested an investigation against Colombia before the Secretary General at the Andean Community in the same subject area as the disputes initiated in 2000.[29] This dispute dealt with restrictions on bovine products. Venezuela cited a possible breach of Colombia's obligations under Article 4 of the Treaty Creating the Court of Justice and the liberalization program of the Cartagena Agreement, under provisions of Chapter V, particularly Article 72. However, Colombia argued, and the dispute settlement body agreed, that this agreement deals with barriers to imports, while the policy under dispute deals with restrictions of exports. While the inevitable decision of this dispute by the General Secretariat was contrary to the arguments and positions of Venezuela, this dispute demonstrates that Venezuela still had the opportunity to learn, and apply what it learned, from the disputes in the previous year.

Before demonstrating the potential for learning in these disputes and how that can influence forum choice, I examine an alternative explanation for why Venezuela initiated a dispute against Colombia at the dispute settlement body of the Andean Community instead of the dispute settlement mechanism of the WTO; this explanation is, however, insufficient for understanding this forum choice. One potential explanation focuses on the litigation costs as a driving force in the decision to initiate regionally. However, the record of Venezuelan experience at the WTO undermines the validity of this explanation. As evidenced from the results in Davis and Bermeo (2009), developing countries have the

[28] It is argued in this dispute that Resolution 365 of 200 violated articles 71, 72, 75, 76, 91, 99 paragraphs b), d), and f), 102, 103, 104, and 155 of the Cartagena Agreement as well as Article 4 of the Treaty Creating the Court, Decision 474 of the Commission and of Articles 2 and 4 of Resolution 388 of the General Secretariat of the Andean Community. These decisions are available for download from the IDATD (2012).

[29] This dispute is transitional measures on exports of live bovine (SG-RG-46). The decision is available for download from the IDATD (2012).

potential to increase their capacity through repeated use of the WTO. Venezuela had extensive experience at the WTO as a complainant, respondent, and third party.[30] Further, Venezuela's experience initiating a dispute at the WTO demonstrates that doing so is not an unfeasible alternative; in fact, this dispute may have been relatively more costly for Venezuela because this WTO dispute was initiated against the United States and was pursued to the appellate phase of the process.[31] Additionally, Venezuelan behavior is seemingly incompatible with a cost-based explanation given that the trade value of bovine meat exports is less than 0.0001% of the trade value of all exports.[32] Given the costs of dispute settlement at either the regional or multilateral forum, the gain in the trade value from dispute resolution is likely less that the costs of using a formal mechanism to resolve this trade dispute.

Although a cost based explanations is insufficient for explaining Venezuela's initiation of its dispute at the Andean Community, considering how Venezuela was able to learn through previous experience and apply those lessons, which provides greater insight into forum choice for this dispute. Despite the fact that the decisions issued by the Court of Justice and General Secretariat are neither explicit in the complainant's rationales for choosing a regional forum over a multilateral one nor provide clear evidence of what states learn from these experiences, there are a number of insights that can be gained from these decisions on what and how states learn from participation in disputes. Venezuela's experiences as a respondent in the agricultural disputes are no different. Although there are differences in the exact good and type of restriction in the disputes against Venezuela in 2000 and those involved in the disagreements between Venezuela against Colombia in 2001, there are commonalities in the elements of the agreement that are contested in these disputes. A key way in which Venezuela could learn from these experiences is the application of various elements of the agreement. Both elements of the agreement cited by Venezuela as evidence of the violation in the 2001 dispute were involved in the disputes against Venezuela in 2000. This demonstrates that Venezuela had the opportunity to learn about these elements

[30] In these roles, Venezuela participated in nineteen WTO disputes.
[31] This dispute is WTO/DS 2.
[32] This is based on data from UN Comtrade. The trade value of bovine meat products (HS four digit code 0201) in 2000 exported from Venezuela to Colombia is $34,626. The trade value for all commodities exported from Venezuela to Colombia in 2000 is $853,445,696.

of the agreement and enhance its dispute settlement mechanism via the disputes initiated against it in 2000.

The application of these various elements may also lead to a change in Venezuela's perspectives on which forum provides the greatest potential benefit; i.e., Venezuela may believe there to be increasing returns to using the same forum to disputes in agricultural issues. Such a rationale highlights a potential alternative mechanism – path dependence in dispute initiation behavior. However, path dependence is unlikely to be the driving force in Venezuelan dispute initiation behavior. First, the disputes initiated in 2000 were *against* Venezuela while the disputes initiated in 2001 were initiated *by* Venezuela. The different roles played by Venezuela in these disputes make it such that Venezuela is not able to replicate its approach and/or behavior. Second, Venezuela's experiences in disputes initiated in 2000 were not wholly positive; only half of the disputes had rulings that supported Venezuela's position. With such mixed support for its position, Venezuela could not necessarily expect that there would be increasing positive returns on future use of the Andean Community to resolve international trade disputes with Colombia. However, such mixed results at these bodies provide Venezuela with the opportunity to see under what circumstances doing so will be positive and/or beneficial to its trade goals and objectives.

Through each of these disputes, Venezuela had the opportunity to gain insight into what is considered a violation of its obligations as a member state of the Andean Community as well as the how the formal adjudicatory body interprets these obligations. This is demonstrated by Venezuela's repeated use of concepts in prior disputes against it in its argument in support of its position in the dispute it initiated in 2001. Based on my arguments above, I would also expect that Venezuela's ability to learn and apply the lessons from its previous experience to be based on its level of learning capacity. For each value of the measures of learning capacity for Venezuela in 2000, the marginal effects of previous regional dispute experience are positive and statistically significant. The measure of development for Venezuela in 2000 is just above the mean.[33] Based on the findings represented in figure 4.1, I expect that at this level of development the marginal effect of the number of disputes in the prior year will be positive

[33] The natural log of Venezuela's GDP per capita in 2000 is 8.4803 (World Bank 2011).

and statistically significant, which is what is observed.[34] This indicates that Venezuela has a middle range of learning capacity, as defined by this variable.

The value of the first measure of the dyadic relationship component of learning capacity – i.e., the value of the ratio of Venezuela's sector exports to the other member of the dyad over total exports – is just below the mean level of this variable.[35] At this value of the ratio, the marginal effect of the number of regional disputes in the prior year is positive and statistically significant.[36] For the value of sector exports for the dyad over GDP, the measure is just below the mean for Venezuela in 2000.[37] Again, the value of this measure for Venezuela in 2000 demonstrates a positive and statistically significant marginal effect.[38]

The measure of $Power_{ij\ t-1}$ for Venezuela in 2000 is at the upper end of all the values observed in the data set.[39] Based on my expectations, Venezuela's learning capacity is not as high as it is according to other measures, such as level of development. Despite this, when assessing the marginal effect of the number of previous regional disputes initiated against the potential complainant the marginal effects are again positive and statistically significant for the value of this variable observed for Venezuela in 2000.[40] However, the differences in the marginal effects when considering the effect of previous regional experience conditional on development and conditional on $Power_{ij\ t-1}$ demonstrate the differences based on learning capacity. The marginal effects are attenuated as Venezuela's learning capacity is theorized to decrease; when conditional on the level of development, the marginal effects demonstrate that an increase in the number of previous regional dyadic disputes is associated with a 1.57% increase in the likelihood of initiating a regional dispute while it is associated with a 1.38% increase in the likelihood when conditional on the disparity of economic power in the dyad.

[34] Although not reported, the marginal effect of the number of previous regional disputes at this value is 0.0157, with a standard error of 0.004.
[35] The natural log of the ratio of the dyad's sector exports to total exports for Venezuela in 2000 is equal to -3.255.
[36] Although not reported, the marginal effect of the number of previous regional disputes at this value is 0.01399, with a standard error of 0.005.
[37] The natural log of the ratio of the dyad's sector exports to GDP per capita for Venezuela in 2000 is equal to -13.593
[38] Although not reported, the marginal effect of the number of previous regional disputes at this value of the ratio of sector exports to GDP is 0.0178, with a standard error of 0.0039.
[39] *Power* is equal to -0.298 for Venezuela in 2000.
[40] Although not reported, the marginal effect of the number of previous regional disputes at this value of *Power* is 0.0138, with a standard error of 0.0039.

### 4.2.3 ILLUSTRATIVE EVIDENCE: THE UNITED STATES AND CANADA AT THE NAFTA

In the previous section, I discussed the use of the dispute settlement mechanism of the Andean Community by two developing countries – Colombia and Venezuela. In so doing, I demonstrated the potential for and evidence of Venezuelan learning from these disputes and the extent to which that learning could vary based on learning capacity, i.e., the state's level of development and the dyadic economic relationship. To further demonstrate the validity of the learning mechanism developed in chapter two and empirically supported in this chapter, I now provide evidence that demonstrates the minimal learning that has occurred through the dispute experiences of developed countries. I turn my attention specifically to disputes in corrosion-resistant steel between the United States and Canada at the NAFTA. In examining these disputes, I focus on whether or not learning from previous experience as a respondent in disputes initiated by the United States against the Canada was a key element in forum choice in future disputes initiated by Canada against the United States.

In terms of frequency of use, the United States and Canada have used both the regional and multilateral forums to resolve disputes with each other over time. This includes disputes that have been terminated in the consultations phase to those that have had repeated panel rulings at both forums, such as in the *Softwood Lumber* dispute described in chapter one. The frequent use of these institutions demonstrates that neither state is devoid of experiences that they could potentially learn from. However, it is the characteristics of these states that make learning less likely and, as a result, less useful for understanding forum choice in future disputes. First, these states have a higher level of resources to establish a more enhanced dispute resolution infrastructure that allows for a reduction in the relative costs of dispute settlement; for example, there were six disputes between the US and Canada in 1995 alone.[41] Engaging in disputes with a more enhanced initial dispute infrastructure leads to the expectations that the space between anticipated and observed costs and outcomes associated with dispute settlement, i.e.,

[41] Four of these disputes were initiated by Canada against the United States in the "agriculture" subject area, one was initiated by Canada against the United States in the "low-tech manufacturing" subject area, and one was initiated by the United States against Canada in the "manufacturing/electrical" subject area. These disputes account for 54.54% of disputes initiated at the NAFTA in 1995.

learning space, is relatively small. Second, more developed countries are also characterized by the presence of industries and sectors that can help support the dispute resolution endeavors. Such behavior can contribute to firm specific learning but would have a more limited effect on state-level learning about the dispute settlement mechanism. Combining these characteristics, it is expected that these developed countries will learn less from previous experience and, as a result, previous experience will have a more limited effect on future forum choices.

Such a phenomenon is apparent when examining disputes over corrosion resistant steel between the United States and Canada. This issue was one of the first disputes before the new NAFTA dispute settlement body following its transformation from its former manifestation under the Canada-US Free Trade Agreement. The United States initiated two disputes on Corrosion-Resistant Steel, on August 12, 1994 and September 1, 1994, against Canada.[42] In these disputes, a number of private firms participated in the dispute; this includes US Steel and LTV Steel Company, among others, which contested the final determination issued by the Canadian Deputy Minister that held that certain subject goods originating in or exported from the United States were being dumped in Canada, which was based on a formal dumping complaint submitted by Dofasco, Inc. and Stelco, Inc. The key issues inherent in these disputes are the costs included and excluded in the Deputy Minister's calculations that resulted in the conclusion that the dumping is likely to cause material injury. The latter dispute also included a concurrent complaint by Stelco, Inc. regarding the Canadian International Trade Tribunal's (CITT) decision to exclude certain corrosion-resistant steel products. In the first dispute, the binantional panel first remanded CITT's final determination – i.e., found that the policy was inconsistent with its obligations as a member state of NAFTA – and then affirmed its redetermination on remand. In the second dispute initiated, the binational panel affirmed the CITT's final determination in its first decision.

In these disputes, Canada participated as the respondent. Given the learning mechanism posited and supported above, this experience as a respondent should contribute to the likelihood that the Canadian

[42] CDA-USA-1994-1904-03 and CDA-USA-1994-1904-04. Based on the text in the decision associated with the former dispute indicates that the latter is an amended complaint.

authorities are more likely to utilize a regional body in future disputes. This is seemingly observed when considering that three disputes were initiated in 1998, 1999, and 2000 by Canada against the United States in corrosion-resistant steel. However, a closer look at the arguments and findings in the panel rulings of the disputes initiated in 1998 and 1999 indicate that learning from previous disputes likely had a more limited effect on Canada's forum choices.[43] One key facet of these disputes that contributes to this conclusion is the role of Stelco, Inc., a firm key in the issues considered in the early disputes on corrosion-resistant steel.

In the corrosion-resistant steel disputes initiated by Canada against the United States in 1997 and 1998, the challenge was based on the US Department of Commerce's final determination based on the policies and activities of Stelco.[44] Since Stelco is at the heart of Commerce's determination, it was Stelco that was a driving force behind this challenge initiated by Canada. In the dispute initiated in 1997, the panel remanded the final redetermination and first redetermination on remand, i.e., ruled that the Department of Commerce erred in the formulation of its policies on corrosion-resistant steel according to the US's obligations as a member state of the NAFTA, but affirmed its second redetermination on remand, i.e., ruled that the altered policy was consistent with the US's obligations. A similar outcome occurred with the dispute initiated in 1998; the panel twice remanded the issue back to the US Department of Commerce. Across the disputes initiated against the United States, the Panel was responsive and supportive to the claims based off of NAFTA and WTO antidumping laws and regulations made by Stelco, which served as the foundation for the Canadian position in the dispute.

These disputes indicate that, in developed countries especially, behavior can be driven by powerful firms within the state. Stelco played a very prominent role across these disputes supporting the Canadian position as either a complainant or respondent. In this particular dispute, the panel's rulings facilitated a push for US decision-makers to make better decisions.[45] While this particular firm may have

[43] I exclude the dispute initiated in 2000 because it was terminated. As a result, I do not have access to documents associated with the dispute.
[44] These disputes are, respectively, USA-CDA-1997-1904-03 and USA-CDA-1998-1904-01.
[45] Murphy (2002), 244

been able to learn from its first experience contesting the determination issued by the CITT, which contributed to the formulation of its perspective and litigation strategy in building a case against the US Department of Commerce, such learning is possessed by the firm and not uniquely attained by and built into the Canadian dispute resolution infrastructure. The role of this firm indicates that the dispute resolution endeavors of developed countries can be supported by well-financed and motivated firms. When these firms combine efforts, they contribute independent skills and knowledge bases that are distinct from a state's dispute resolution infrastructure. Given the strength of such firms in developed countries, they can alter a state's forum shopping calculations in such a way to make a particular forum a preferred choice. The ability of strong, well-financed, and influential firms to drive dispute settlement behavior provides support for other mechanisms associated with explaining dispute resolution behavior. Yet, it also demonstrates that learning, if it is occurring and/or driving future regional forum choices in international trade disputes, is likely much more limited.

## 4.3 Short- v. Long-Term Effect of Previous Dispute Experience on Forum Shopping Choices

A state is not limited to only learning from its most recent experiences. In this section, I extend the time frame of previous regional dispute experience to examine the long-term effect of learning. In the previous sections, I have focused on the effect of short-term learning by looking at how experience in the previous year influences dispute initiation at a particular forum in the current year. However, state learning through dispute experience may be cumulative. In this section, I investigate whether learning at dispute settlement bodies is cumulative by looking at the effect of previous dispute settlement experience across a longer time frame.

**Table 4.4: Influence of Long-Term Previous Regional Dispute Experience in Same Subject Area on Trade Dispute Forum Choice**

| | Model 7 | | | Model 8 | | |
|---|---|---|---|---|---|---|
| | No Dispute | Regional Dispute | Both Forums | No Dispute | Regional Dispute | Both Forums |

| | | | | | | |
|---|---|---|---|---|---|---|
| # Regional Disputes (5YR Sum) $_{ijst-1}$ | 0.117 | 0.247** | 0.266** | -1.886*** | -1.198** | -0.916*** |
| | (0.138) | (0.143) | (0.127) | (0.409) | (0.594) | (0.362) |
| # Regional Disputes (5YR Sum) $_{ijst-1}$ X Ln (GDP pc) $_{it-1}$ | | | | 0.211*** | 0.147** | 0.117*** |
| | | | | (0.0470) | (0.0715) | (0.0425) |
| # WTO Disputes $_{ijst-1}$ | -0.877*** | -1.108*** | -1.352*** | -1.212*** | -1.208*** | -1.308*** |
| | (0.364) | (0.324) | (0.348) | (0.264) | (0.328) | (0.420) |
| # Third Party | -0.0455 | -0.111* | -0.0855 | -0.0598 | -0.128* | -0.104 |
| | (0.0802) | (0.0855) | (0.121) | (0.0809) | (0.0866) | (0.124) |
| Power | 0.650 | 0.558 | 1.912** | 1.138 | 1.020 | 2.417** |
| | (1.059) | (1.062) | (0.966) | (1.203) | (1.214) | (1.069) |
| Ln GDP pc $_{it-1}$ | -1.502 | -1.710* | -2.531* | -2.479** | -2.588** | -3.344** |
| | (1.276) | (1.275) | (1.799) | (1.427) | (1.449) | (1.941) |
| Ln GDP pc $_{jt-1}$ | -2.120*** | -1.860*** | -2.283*** | -2.186*** | -1.946*** | -2.548*** |
| | (0.742) | (0.735) | (0.903) | (0.750) | (0.744) | (0.941) |
| Ln Sector Exports $_{ij\ s\ t-1}$/ GDP $_{i\ t-1}$ | -0.623** | -0.476 | 0.712** | -0.328 | -0.197 | 0.985** |
| | (0.358) | (0.371) | (0.392) | (0.385) | (0.397) | (0.425) |
| Ln Total Trade/ GDP $_{i\ t-1}$ | 3.024** | 2.096 | 2.810** | 3.348** | 2.395 | 3.147** |
| | (1.691) | (1.756) | (1.447) | (1.823) | (1.892) | (1.546) |
| Sector Exports $_{ij\ s\ t-1}$/ Total Exports $_{ij\ t-1}$ | 1.089*** | 1.408*** | 0.0466 | 0.736** | 1.066*** | -0.188 |
| | (0.362) | (0.401) | (0.519) | (0.388) | (0.426) | (0.501) |
| Polity 2 $_{it-1}$ | 0.484* | 0.410 | 1.007* | 0.692** | 0.615* | 1.189* |
| | (0.370) | (0.364) | (0.738) | (0.383) | (0.379) | (0.758) |
| Polity 2 $_{jt-1}$ | 0.997*** | 1.031*** | 0.699** | 0.960*** | 0.995*** | 0.728*** |
| | (0.235) | (0.241) | (0.310) | (0.208) | (0.213) | (0.267) |
| RTA Dispute $_{ijst-1}$ | -1.894*** | -0.577 | 0.780** | -1.946*** | -0.669* | 0.773** |
| | (0.489) | (0.453) | (0.424) | (0.524) | (0.485) | (0.401) |
| WTO Dispute $_{ijst-1}$ | -1.386*** | 0.0635 | 2.414*** | -1.401*** | -0.125 | 2.247*** |
| | (0.569) | (1.449) | (0.533) | (0.489) | (1.381) | (0.512) |
| Both Dispute $_{ijst-1}$ | -3.361*** | -0.0917 | 0.714 | -3.475*** | -0.297 | 0.507 |
| | (0.693) | (1.061) | (1.081) | (0.713) | (1.106) | (1.145) |
| CAN | 13.51*** | 13.86*** | -4.484** | 12.15*** | 12.41*** | -6.316*** |
| | (2.153) | (2.168) | (2.472) | (1.672) | (1.699) | (2.106) |
| MERC | -0.809 | -0.267 | -3.582** | -1.086 | -0.636 | -4.318** |
| | (1.058) | (1.254) | (2.001) | (1.155) | (1.370) | (2.175) |
| CACM | 7.631** | 6.648* | -11.11*** | 5.303 | 4.363 | -14.01*** |
| | (4.605) | (4.644) | (4.466) | (4.789) | (4.855) | (4.655) |
| constant | 11.68 | 14.94 | 33.12** | 22.82* | 25.38** | 44.38*** |
| | (13.57) | (13.34) | (16.10) | (14.50) | (14.37) | (17.19) |
| N | | 3661 | | | 3661 | |
| Pseudo $R^2$ | | 0.311 | | | 0.315 | |

| | | |
|---|---|---|
| Log Pseudolikelihood | -951.232 | -945.730 |

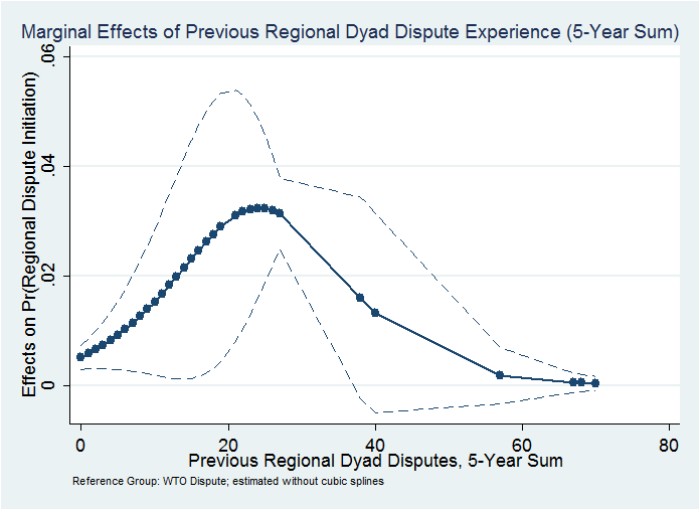
Note: Robust standard errors in parentheses. P values are calculated for a one-tailed hypothesis test. Observations clustered by dyad *p < 0.10, **p < 0.05, ***p < 0.01

To assess the long-term effect, I have constructed a measure of previous experience that utilizes the dyadic measure of previous experience used in the previous section. The long-term measure of previous dispute initiation experience is the sum of the number of disputes initiated by state *j* against state *i* in year *t-1* through *t-5* in subject area *s*. Using this measure, I re-estimate my models to assess the long-term effect of previous regional dispute experience on forum choice, which are reported in tables 4.4 and 4.5. Again, I examine both the unconditional and conditional effects of long-term previous regional dyadic dispute experience. There are a number of similarities and differences between the models accounting for the long- and short-term effect of previous experience.

Model 7, which captures the unconditional effect of the number of previous regional disputes initiated, is similar in that an increase in long-term previous regional dispute experience increases the likelihood of initiating a regional dispute and disputes at both forums, relative to initiating a dispute at only the WTO. This model is different from the short-term unconditional model insofar that this measure fails to achieve statistical significance at conventional levels when predicting the likelihood of no dispute. Another key difference between this model and above is the size of the marginal effects.[46] While the marginal effects again exhibit a stumbling block effect of regional dispute settlement bodies, the effect is smaller. An increase in the number of regional disputes initiated against the potential complainant in the previous five years is associated with a 0.58% increase in the likelihood of initiating a dispute at a regional trade dispute settlement body in the current year. This provides support for the idea that states learn and apply the lessons learned from disputes in both the short- and long-term.

[46] These marginal effects are reported in tables in Appendix A.1.

**Figure 4.6: Marginal Effects of Previous Regional Dyad Disputes (5-Year Sum)**



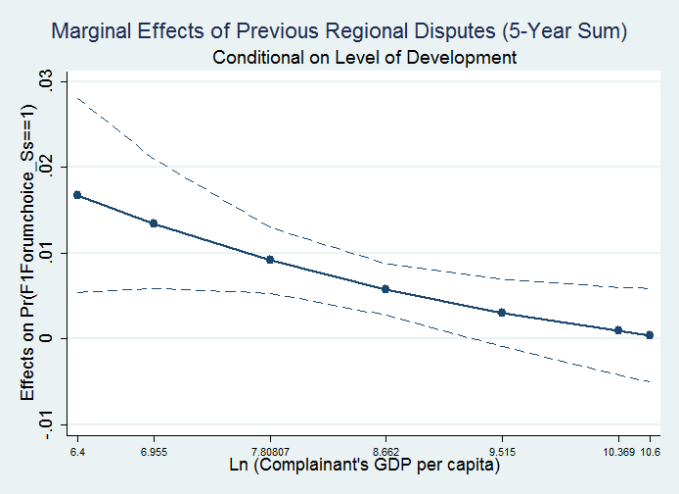

There are also diminishing marginal effects associated with each additional long-term dispute initiation experience above a certain level of prior experience, which provides further support of hypothesis 3. Again, a non-linear relationship is observed when examining the marginal effects of previous regional dispute experience as the number of disputes initiated against the potential complainant in the past five years increases, which is shown in figure 4.6. In contrast with the short-term measures of previous regional dispute experience, the marginal effects associated with the long-term measure are able to attain statistical significance at nearly all levels except at the very highest. Additionally, these marginal effects are smaller when using the long-term measure of previous regional dispute experience relative to those observed with the short-term measure. The non-conditional effects of previous regional dispute experience demonstrate that states do, to a certain extent, engage in cumulative learning and that the extent of the influence of previous experience varies based on the amount of dispute initiation experience available to learn from.

### 4.3.1 Conditional Effect of Cumulative Previous Regional Dispute Experience

Again, the ability and incentive to learn are expected to influence the observed effect of the amount of long-term previous dispute experience on future forum choice. In this section, I assess the conditional effect of cumulative learning. Regardless of the cumulative or short-term nature of learning, a

state will face differences in terms of its learning capacity, which will influence its need and incentive to absorb the information provided through these experiences. Each of the elements of learning capacity will influence the information gathered and internalized from previous experience over the long-term, which will have an effect on a state's forum choice in future trade disputes, and thus, the stumbling block effect of regional trade dispute settlement bodies.

**Figure 4.7: Previous Regional Dyad Disputes (5-Year Sum), Conditional on Level of Development**




The first component of learning capacity, level of development, is interacted with long-term previous experience in model 8 in table 4.4. The coefficients in this model exhibit similar relationships as those observed in the models estimating the effect of the short-term dyadic previous experience when conditioned by level of development. Again, the component terms are statistically significant associated with a decrease in the likelihood of each of the forum choice alternatives while the interaction terms exhibits a statistically significant and positive relationship. The marginal effects of the long-term measure of previous experience, when conditioned by level of development, provide further support for my expectations. When examining the marginal effects more closely – which are reported in figure 4.7 – they demonstrate that an increase in cumulative regional dispute initiation experience increases the likelihood that a regional dispute is initiated in the following year, relative to the likelihood that only a WTO dispute is initiated, and that the size of the conditional marginal effects decreases as learning capacity decreases. In fact, the marginal effects become statistically insignificant at the highest levels of

development. Comparing these results to those in the previous section, the marginal effects of cumulative experience are smaller than those effects observed with the short-term measure of previous experience. At the lowest, mean, and high levels of development, an increase in the number of disputes initiated over a five year period is associated with a 1.67%, 0.92%, and 0.57% increase in the likelihood of initiating a dispute at the regional dispute settlement body in the following year.

**Table 4.5: Influence of Long-Term Previous Regional Dispute Experience in Same Subject Area on Trade Dispute Forum Choice , Conditional on Incentive Component of Learning Capacity**

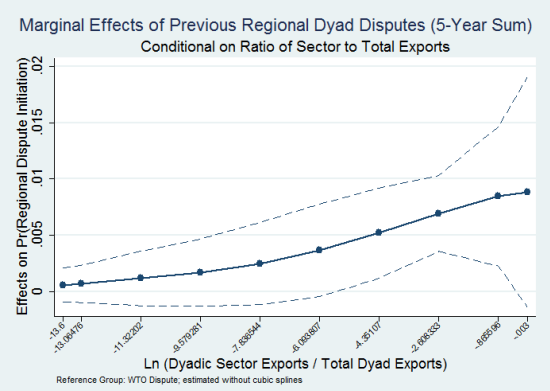
| | Model 9 | | | Model 10 | | | Model 11 | |
|---|---|---|---|---|---|---|---|---|
| | No Dispute | Regional Dispute | Both Forums | No Dispute | Regional Dispute | Both Forums | No Dispute | Regional Dispute |
| # Regional Disputes (5YR Sum) $_{ijst-1}$ | 0.619*** | 0.716*** | 0.490** | 1.325* | 1.234* | 1.182** | 0.214 | 0.330** |
| | (0.229) | (0.222) | (0.241) | (0.900) | (0.850) | (0.569) | (0.187) | (0.189) |
| # Regional Disputes (5YR Sum) $_{iist-1}$ X Sector Exports $_{ii\ t-1}$/ Total Exports $_{ii\ t-1}$ | 0.255*** | 0.233*** | 0.137* | | | | | |
| | (0.0760) | (0.0659) | (0.0934) | | | | | |
| # Regional Disputes (5YR Sum) $_{iist-1}$ X Sector Exports $_{ii\ t-1}$/ GDP $_{i\ t-1}$ | | | | 0.0967* | 0.0797 | 0.0746* | | |
| | | | | (0.0731) | (0.0702) | (0.0513) | | |
| # Regional Disputes (5YR Sum) $_{iist-1}$ X Power $_{iit-1}$ | | | | | | | 0.137** | 0.124** |
| | | | | | | | (0.0806) | (0.0736) |
| # WTO Disputes $_{iist-1}$ | -0.988*** | -1.216*** | -1.198*** | -0.922*** | -1.119*** | -1.342*** | -0.980** | -1.187*** |
| | (0.332) | (0.271) | (0.393) | (0.219) | (0.191) | (0.346) | (0.434) | (0.372) |
| # Third Party | -0.0150 | -0.0822 | -0.0694 | -0.0388 | -0.107 | -0.0836 | -0.0505 | -0.115* |
| | (0.0831) | (0.0914) | (0.131) | (0.0841) | (0.0901) | (0.128) | (0.0770) | (0.0821) |
| Power | 0.919 | 0.822 | 2.029*** | 0.646 | 0.538 | 1.886*** | 0.550 | 0.487 |
| | (0.903) | (0.903) | (0.852) | (0.865) | (0.863) | (0.761) | (1.338) | (1.356) |
| Ln GDP pc $_{iit-1}$ | -1.986* | -2.192* | -2.827* | -1.463* | -1.652* | -2.447* | -1.972 | -2.194 |
| | (1.381) | (1.376) | (1.974) | (1.135) | (1.142) | (1.755) | (1.797) | (1.788) |
| Ln GDP pc $_{ijt-1}$ | -1.915*** | -1.664** | -2.303*** | -2.004*** | -1.758** | -2.186*** | -2.306*** | -2.043*** |
| | (0.823) | (0.819) | (0.930) | (0.783) | (0.773) | (0.915) | (0.843) | (0.830) |
| Ln Sector Exports $_{ij\ t-1}$/ GDP $_{i\ t-1}$ | -0.582* | -0.435 | 0.702* | -0.717** | -0.553* | 0.622* | -0.639* | -0.489 |
| | (0.356) | (0.365) | (0.462) | (0.346) | (0.360) | (0.388) | (0.426) | (0.436) |
| Ln Total Trade/ GDP $_{i\ t-1}$ | 3.137*** | 2.210* | 2.606** | 2.821** | 1.886 | 2.622** | 3.287* | 2.364 |
| | (1.317) | (1.389) | (1.245) | (1.519) | (1.576) | (1.253) | (2.202) | (2.285) |
| Sector Exports $_{ij\ t-1}$/ Total Exports $_{ij\ t-1}$ | 0.724** | 1.066*** | 0.0235 | 1.083*** | 1.402*** | 0.0747 | 1.101*** | 1.415*** |
| | (0.373) | (0.412) | (0.555) | (0.345) | (0.383) | (0.489) | (0.431) | (0.467) |
| Polity 2 $_{it-1}$ | 0.587* | 0.514* | 1.036* | 0.466* | 0.391 | 0.974* | 0.657* | 0.584 |
| | (0.392) | (0.387) | (0.769) | (0.357) | (0.351) | (0.740) | (0.477) | (0.472) |
| Polity 2 $_{jt-1}$ | 1.003*** | 1.040*** | 0.783** | 0.986*** | 1.024*** | 0.701*** | 1.047*** | 1.081*** |
| | (0.296) | (0.303) | (0.342) | (0.255) | (0.261) | (0.300) | (0.269) | (0.275) |
| RTA Dispute $_{ijst-1}$ | -2.119*** | -0.803** | 0.702** | -1.876*** | -0.563 | 0.824** | -1.936*** | -0.617* |
| | (0.487) | (0.442) | (0.346) | (0.491) | (0.446) | (0.415) | (0.494) | (0.454) |
| WTO Dispute $_{ijst-1}$ | -0.931 | 0.472 | 2.724*** | -1.160* | 0.247 | 2.616*** | -1.370*** | 0.0739 |
| | (0.729) | (1.610) | (0.464) | (0.823) | (1.623) | (0.422) | (0.475) | (1.362) |
| Both Dispute $_{ijst-1}$ | -2.972*** | 0.251 | 1.013 | -3.351*** | -0.0758 | 0.747 | -3.189*** | 0.0514 |
| | (0.770) | (1.174) | (1.280) | (0.745) | (1.050) | (0.994) | (0.725) | (1.161) |
| CAN | 13.17*** | 13.52*** | -5.083** | 14.19*** | 14.55*** | -4.613** | 14.01*** | 14.33*** |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | (1.774) | (1.823) | (2.384) | (1.852) | (1.959) | (2.263) | (2.702) | (2.605) |
| MERC | -0.522 | 0.00783 | -3.418* | -0.631 | -0.0943 | -3.412* | -1.232 | -0.703 |
| | (1.124) | (1.320) | (2.215) | (1.193) | (1.370) | (2.135) | (1.285) | (1.441) |
| CACM | 7.018** | 6.017* | -12.11*** | 8.928** | 7.958** | -10.79*** | 7.374 | 6.355 |
| | (4.182) | (4.239) | (4.467) | (4.100) | (4.167) | (4.066) | (6.227) | (6.245) |
| Constant | 13.04 | 16.35 | 35.97** | 9.972 | 13.40 | 31.24** | 15.04 | 18.44 |
| | (13.68) | (13.46) | (16.60) | (13.49) | (13.17) | (16.09) | (16.19) | (15.84) |
| N | | 3661 | | | 3661 | | | 3661 |
| Pseudo $R^2$ | | 0.313 | | | 0.312 | | | 0.312 |
| Log Pseudolikelihood | | -947.608 | | | -950.125 | | | -949.534 |

Note: Robust standard errors in parentheses. P values are calculated for a one-tailed hypothesis test. Observations clustered by dyad
*p < 0.10, **p < 0.05, ***p < 0.01

When this long-term measure of previous experience is interacted with the incentive indicators of learning capacity, which capture the economic relationship of the members of the dyad, the results show some similarities and differences with models estimated in the previous section as seen in table 4.5. The component and interaction terms associated with the number of previous regional disputes over the past five years exhibit a statistically significant relationship with each of the dispute resolution alternatives in these models. When conditioned by the ratio of dyadic exports in a particular subject area to total dyadic exports and the economic power disparities of the dyad, an increase in the component and interaction terms associated with cumulative previous dispute initiation experience are associated with an increase in the likelihood of each dispute resolution outcomes, relative to the likelihood of initiating only a WTO dispute. However, only the previous experience component term is positive and statistically significant when learning capacity is measured by the ratio of dyadic exports in a specific subject area over the potential complainant's GDP.

**Figure 4.8: Marginal Effects of Previous Regional Dyad Disputes (5-Year Sum), Conditional on Ratio of Sector to Total Exports**



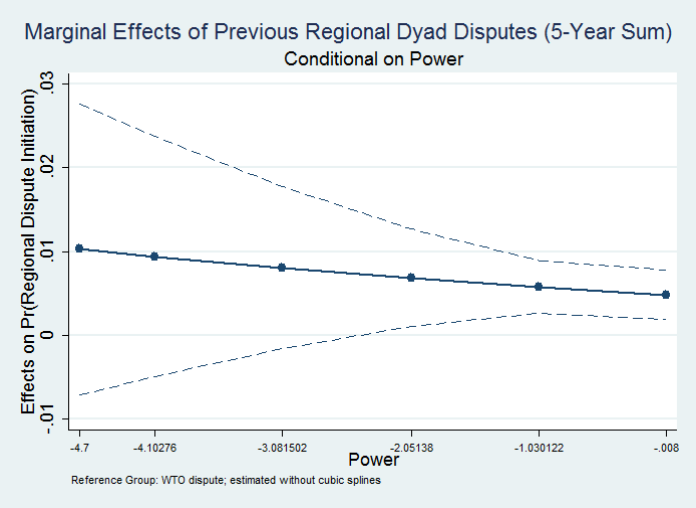
The marginal effects associated with regional dispute initiation experience in the previous five years, when conditional on the dyadic relationship component of learning capacity, provide further support for the hypothesized stumbling block effect of regional dispute settlement bodies. When learning capacity is measured as the dependence on dyadic exports in a subject area relative to total dyadic exports, an increase in the long-term count of previous disputes initiated is associated with a positive change in the likelihood in only regional dispute initiation in the future, relative to WTO dispute initiation only. These marginal effects reported in figure 4.8.[47] As dependence on subject area exports increases, the marginal effects change in a manner that is consistent with my expectations; the marginal effects increase as this ratio increases and attain statistical significance at the mid- to high-levels. Again, the marginal effects of long-term previous dispute initiation experience are smaller than those associated with the short-term effect of previous regional dispute initiation experience. For this model, an increase in the number of disputes initiated against a potential complainant in the past five years is associated with a 1.6% increase in the likelihood of regional dispute initiation; this effect is almost 2.5 times smaller than the short-term measure. As a potential complainant becomes more reliant on exports in that sector and, thus, has an increased incentive to learn from each previous experience, the effects increase. An increase in the number of disputes initiated against the potential complainant, *i*, by the potential respondent, *j*, in the previous five years increases the likelihood that state *i* will initiate a dispute against state *j* in the following year by 0.37%, 0.69%, and 0.88% at two standard deviations below the mean, the mean, and two standard deviations above the mean, respectively.

In model 10, which captures the conditional effect of previous experience by measuring learning capacity as the potential complainant's dependence on exports to the potential respondent relative to the its overall economy, I again find some support for my expectations. Unlike previous models, the marginal effects exhibit a somewhat non-linear relationship as this ratio increases. However, the marginal effects are only able to achieve statistical significance when the potential complainant's economy is neither overly dependent on nor independent from dyadic exports in a subject area; specifically, at the mean of

[47] These conditional marginal effects are also reported in tables in Appendix A.1.

the ratio and one standard deviation below the mean. At these values of the ratio of subject area exports to GDP, an increase in the five-year sum of regional disputes initiated against the potential complainant is associated with a 0.7% and 0.6% increase in the likelihood of a regional dispute being initiated. This result provides some support for my expectation that an increase in this ratio – which would be associated with an increase in learning capacity – increases the marginal effects of previous regional dispute experience.

**Figure 4.9: Marginal Effects of Previous Regional Dyad Disputes (5-Year Sum), Conditional on *Power***




Measuring learning experience as the dyad's economic power disparity, I again see results that support the expected stumbling block effect of regional trade dispute settlement bodies.[48] The conditional marginal effects of long-term previous dispute initiation experience associated with this model are found in figure 4.9. When conditional on dyadic economic power disparities, an increase in the number of disputes initiated in the past five years is associated with an increase in the likelihood of a regional dispute being initiated, relative to the likelihood of a dispute only being initiated at the WTO. Providing further support for my expectations, the sizes of these effects vary based on learning capacity. Except at the very lowest amounts of the complainant's relative economic power in the dyad, the marginal effects of the five-year sum of previous regional dispute experience are able to attain statistical significance. As

[48] These results are reported in model 11 in table 4.5.

explained above, I expect that learning capacity is inversely related with this measure of dyadic economic power disparities in the dyad; a state has greater learning capacity when the potential respondent is relatively more economically powerful in the dyad. As the complainant's relative power increases to reach parity and favorable disparity, the marginal effects of previous experience are expected decrease, which is what is observed in figure 4.9.[49]

I now turn to examining if, over the long-run, there are also diminishing returns to additional experiences after a certain point. In my third hypothesis, I posited that there are diminishing marginal returns associated with previous regional dispute experience due to the costs associated with initiating a dispute when a state is already defending its policies in a greater number of other disputes. I expect that the same general relationship should be present for the long-term measure of previous regional dispute experience but that the results associated with the effect of cumulative experiences will exhibit a number of key differences from those associated with the short-run measure. First, I expect that the magnitude of the effect of each additional experience will begin to decrease at a higher level of previous dispute initiation experience than seen with the short-term measure. Second, the long-term effects associated with additional dispute experiences should be smaller across all amounts of dispute initiation experience than the effects associated with the short-run measure. I expect these differences in the effects based on the extension in the time frame. A longer time frame not only means that a state can have a greater number of disputes initiated against it but it also means that a state will be able to spread the costs associated with these disputes over a greater time period of time.

As predicted, the marginal effects of each additional dispute experience in the past five years exhibit analogous results to those associated with the short-term measure.[50] When conditional on the

[49] At one standard deviation below the mean, the mean, and the highest level of $Power_{ij\ t-1}$, an increase in the number of disputes in the past five years is associated with a 0.69%, 0.58%, and 0.48% increase in the likelihood of initiating a regional dispute in the following year, respectively.

[50] The conditional marginal effects are presented graphically in figure B.1.3 in Appendix B.1. I only present the marginal effects associated with two of the models estimated; these models measure learning capacity as the level of development and the economic power disparities in the dyad. I present the results associated with these measures for two reasons. First, these two measures capture each of the components of learning capacity. Second, I faced estimation issues when trying to account for the effect of additional experiences in the other conditional effect models. When calculating the marginal effects of additional disputes over a five-year period associated with models 9 and 10, the matrix was highly singular or non-symmetric.

level of development and economic power disparities in the dyad, the marginal effects of the five-year sum of previous regional dispute experience attain statistical significance at nearly all levels except the highest. Further, a non-linear effect is observed. The marginal effects only increase until a certain point and, once reaching that vertex, the size of the marginal effects of each additional dispute initiated over a five-year period begin weakening. There are two key differences across these two models. First, when learning capacity is measured as the level of development, the marginal effects associated with additional disputes are greater than when previous regional dispute experience than when learning capacity is measured by the measure economic power disparities in the dyad. Second, the point at which the marginal effects begin to decrease is higher when long-term previous regional dispute experience is conditioned by $Power_{ij\ t-1}$. For both measures of learning capacity, the marginal effects of the five-year sum of previous regional dispute experience are smaller than those observed for the short-term measure of dyadic regional dispute experience.

Overall, this section supports all three of my primary hypotheses. Again, previous regional dispute experience has a stumbling block effect toward multilateral trade dispute resolution. As the number of times a dispute has been initiated against a potential complainant increase, the likelihood of initiating a regional dispute, relative to the likelihood of initiating a multilateral dispute, increases. This section provides more insight into the manner in which states learn from previous regional dispute experience. When comparing the marginal effects of the short-term measure of previous experience to the marginal effects associated with the long-term previous experience measure in this section, the results demonstrate that short-term experience has a greater marginal effect on forum choice.

## 4.4 The Effect of Previous Dispute Experience as a Respondent on Forum Shopping Choices

In the previous sections I tested my expectations using a measure of previous experience that captured the potential complainant's, state *i*, experiences as a respondent against the current potential respondent, state *j*. Using these measures, the focus was on experience within a particular dyad and its

influence on initiating a dispute within that same dyad. In this section I expand my analysis to consider the effect of all of a potential complainant's regional dispute experiences. This alternate operationalization of regional dispute experience provides a more comprehensive understanding of state learning in previous regional disputes. By examining the effect of experience with all members of the regional dispute settlement body, I will be able to assess whether states can apply any and all information learned from previous experience in endeavors with other member states. This set of tests will help uncover the extent to which regional dispute settlement bodies behave as stumbling blocks toward multilateral trade dispute resolution. I utilize two measures of all regional dispute experience. The first is a count of all disputes against the potential complainant initiated by any member of the regional organization or the organization itself *(# Regional Disputes (ALL)*) while the second is a count of only those disputes initiated by other member states *(# Regional Disputes (MS)*).

**Table 4.6: Influence of All Previous Regional Dispute Experience on Trade Dispute Forum Choice**

| | Model 12 | | | Model 13 | | | Model 14 | | |
|---|---|---|---|---|---|---|---|---|---|
| | No Dispute | Regional Dispute | Both Forums | No Dispute | Regional Dispute | Both Forums | No Dispute | Regional Dispute | Both Forums |
| # Regional Disputes (ALL) $_{ist-1}$ | 0.208 | 0.415* | 0.370 | | | | -0.686 | 0.213 | 0.792 |
| | -0.268 | (0.277) | (0.303) | | | | (2.110) | (2.101) | (2.245) |
| # Regional Disputes (MS) $_{ist-1}$ | | | | 0.222 | 0.375* | 0.346 | | | |
| | | | | (0.261) | (0.272) | (0.290) | | | |
| # Regional Disputes (ALL) $_{ist-1}$ X Ln (GDP pc) $_{it-1}$ | | | | | | | 0.093 | 0.009 | -0.060 |
| | | | | | | | (0.224) | (0.224) | (0.243) |
| # WTO Disputes $_{ist-1}$ | -1.266** | -1.257** | -1.187* | -1.290** | -1.174** | -1.146* | -1.398** | -1.021* | -0.884 |
| | (0.566) | (0.629) | (0.847) | (0.560) | (0.616) | (0.824) | (0.630) | (0.667) | (0.868) |
| # Third Party | -0.036 | -0.086 | -0.083 | -0.0360 | -0.0860 | -0.0823 | -0.036 | -0.094 | -0.077 |
| | (0.068) | (0.074) | (0.116) | (0.0685) | (0.0745) | (0.116) | (0.070) | (0.075) | (0.112) |
| Power | 0.818 | 0.744 | 2.131*** | 0.820 | 0.749 | 2.137*** | 0.859 | 0.784 | 2.268*** |
| | (0.949) | (0.929) | (0.811) | (0.951) | (0.932) | (0.816) | (0.945) | (0.924) | (0.823) |
| Ln GDP $_{pc\ it-1}$ | -1.389* | -1.548** | -2.434** | -1.394* | -1.530* | -2.430* | -1.461* | -1.507** | -2.442** |
| | (0.969) | (0.935) | (1.474) | (0.972) | (0.941) | (1.479) | (0.896) | (0.869) | (1.431) |
| Ln GDP pc $_{it-1}$ | -2.034*** | -1.651*** | -1.822*** | -2.027*** | -1.661*** | -1.841*** | -2.019*** | -1.647*** | -2.069*** |
| | (0.662) | (0.665) | (0.697) | (0.658) | (0.662) | (0.696) | (0.650) | (0.658) | (0.789) |
| Ln Sector Exports $_{ij\ t-1}$/ GDP $_{i\ t-1}$ | -0.538** | -0.318 | 0.850*** | -0.540** | -0.332 | 0.847*** | -0.519** | -0.298 | 0.909*** |
| | (0.316) | (0.337) | (0.313) | (0.317) | (0.337) | (0.316) | (0.310) | (0.331) | (0.315) |
| Ln Total Trade/ GDP $_{i\ t-1}$ | 3.403** | 2.555* | 3.008** | 3.421** | 2.549* | 3.008** | 3.462** | 2.588* | 3.071** |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | (1.556) | (1.670) | (1.366) | (1.555) | (1.668) | (1.388) | (1.535) | (1.649) | (1.492) |
| Sector Exports $_{ij\ t-1}$/ Total Exports $_{ij\ t-1}$ | 0.954*** | 1.188*** | -0.119 | 0.954*** | 1.214*** | -0.105 | 0.931*** | 1.163*** | -0.115 |
| | (0.313) | (0.360) | (0.381) | (0.313) | (0.358) | (0.381) | (0.322) | (0.366) | (0.368) |
| Polity 2 $_{it-1}$ | 0.397* | 0.322 | 0.910* | 0.397* | 0.320 | 0.911* | 0.401* | 0.321 | 0.918* |
| | (0.282) | (0.274) | (0.6498) | (0.283) | (0.275) | (0.649) | (0.276) | (0.270) | (0.665) |
| Polity 2 $_{jt-1}$ | 0.846*** | 0.875*** | 0.420** | 0.846*** | 0.869*** | 0.426** | 0.839*** | 0.865*** | 0.478** |
| | (0.190) | (0.199) | (0.210) | (0.189) | (0.198) | (0.209) | (0.194) | (0.202) | (0.227) |
| RTA Dispute $_{ijst-1}$ | -1.646*** | -0.389 | 1.066*** | -1.675*** | -0.313 | 1.081*** | -1.671*** | -0.431 | 1.191*** |
| | (0.501) | (0.472) | (0.333) | (0.504) | (0.476) | (0.329) | (0.507) | (0.476) | (0.357) |
| WTO Dispute $_{ijst-1}$ | -1.963*** | -0.491 | 1.677*** | -1.964*** | -0.473 | 1.683*** | -1.981*** | -0.584 | 1.707*** |
| | (0.721) | (1.394) | (0.651) | (0.722) | (1.396) | (0.648) | (0.746) | (1.420) | (0.677) |
| Both Dispute $_{ijst-1}$ | -3.103*** | 0.131 | 1.022 | -3.129*** | 0.137 | 1.004 | -3.186*** | 0.034 | 0.948 |
| | (0.760) | (1.263) | (1.325) | (0.765) | (1.244) | (1.315) | (0.820) | (1.239) | (1.297) |
| CAN | 13.713*** | 14.439*** | -4.723*** | 13.29*** | 14.17*** | -4.513** | 12.679*** | 13.337*** | -5.368*** |
| | (1.386) | (1.318) | (1.846) | (1.442) | (1.458) | (1.977) | (1.471) | (1.458) | (2.081) |
| MERC | -0.294 | 0.725 | -2.246* | -0.302 | 0.723 | -2.263* | -0.237 | 0.802 | -2.748* |
| | (0.855) | (1.018) | (1.633) | (0.853) | (1.014) | (1.638) | (0.922) | (1.081) | (1.873) |
| CACM | 8.685*** | 8.209*** | -10.13*** | 8.151*** | 7.652** | -10.18*** | 7.396** | 6.992** | -10.866*** |
| | (3.485) | (3.508) | (3.622) | (3.476) | (3.508) | (3.615) | (3.318) | (3.335) | (3.484) |
| Constant | 11.062 | 13.015 | 31.518*** | 10.95 | 12.95 | 31.62*** | 11.658 | 12.971 | 34.202**** |
| | (11.456) | (11.165) | (13.367) | (11.43) | (11.21) | (13.41) | (10.506) | (10.180) | 12.953 |
| N | | 3661 | | | 3661 | | | 3661 | |
| Pseudo $R^2$ | | 0.316 | | | 0.306 | | | 0.319 | |
| Log Pseudolikelihood | | -943.181 | | | -957.926 | | | -939.415 | |

Note: Robust standard errors in parentheses. P values are calculated for a one-tailed hypothesis test. Observations clustered by dyad *p < 0.10, **p < 0.05, ***p < 0.01

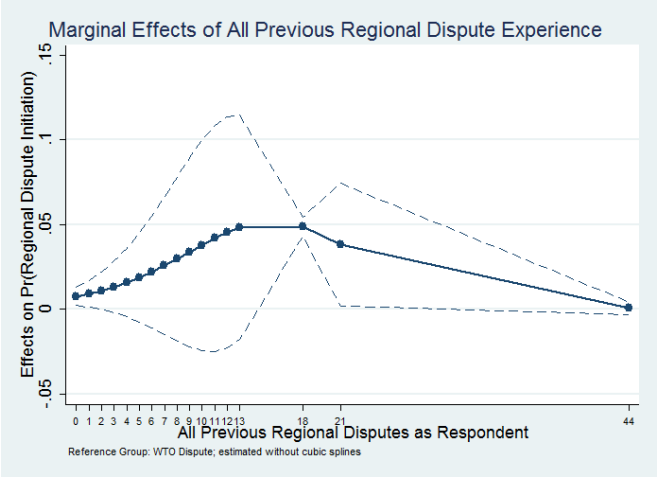
Before delving into the conditional effect of previous regional dispute experience, I re-estimate the unconditional effect using each of the measures of all regional dispute experience.[51] In these models, an increase in regional dispute experience, while barely able to attain statistical significance, is associated with an increase in the likelihood of initiating only a regional dispute relative to the likelihood of initiating a dispute at the WTO. These variables fail to achieve statistical significance at conventional levels for the equations associated with the other forum choice alternatives. Looking to the marginal effects associated with these models, I find further support for this positive relationship.[52] As a potential complainant gains more experience in the previous year with all other member states, the likelihood of

[51] In model 12, I re-estimate model 1 using *# Regional Disputes (ALL)* while model 13 uses *# Regional Disputes (MS)*. I could not re-estimate the effect of the count of disputes initiated across subject areas using either measure of all regional dispute experience because the models were unable to converge.

[52] Marginal effects associated with models 12 and 13 are reported in tables in Appendix A.1.

utilizing a regional dispute settlement body in a dispute in the following year increases.[53] These marginal effects are smaller than those observed with the dyad specific measures of previous experience regional dispute experience.

**Figure 4.10: Marginal Effect of All Disputes as Respondent**




Does this alternative measure of previous experience also provide additional support to my third hypothesis? In figure 4.10, I demonstrate the marginal effects associated with previous regional dispute experience against the complainant as the number of prior experiences increases.[54] These results provide mixed support for my expectation on the diminishing returns on each additional dispute. When utilizing the measure of all previous regional dispute experience in the prior year – which includes disputes initiated against the current potential complainant by other member states and the organization itself – I find some support via the non-linear relationship of the marginal effects. The marginal effects of previous regional dispute experience increase as the number of prior disputes increases, but only up until a certain point. Unlike was observed using the dyadic measure of previous experience, the inflection point is much higher. However, these marginal effects lose statistical significance in the middle range of previous disputes and again at the upper levels. This result is likely due to the fact that costs can be dispersed across dyads of the regional organization. Additionally, the accumulating costs associated with

[53] Specifically, an increase in the number of all disputes initiated against the potential complainant is associated with a 0.89% increase in the likelihood of initiating a regional dispute in the following year while an increase in the number of disputes initiated by member states is associated with a 0.7% increase for models 12 and 13, respectively.
[54] This figure uses *# of Regional Disputes (ALL)*. The marginal effects of *# Regional Disputes (MS)* as this measure increases are not reported because when estimated the matrix was non-symmetric or highly singular.

each additional dispute may be comparatively less important on future dispute initiation as dispute experience increases across member states.

### 4.4.1 CONDITIONAL EFFECT OF TOTAL PREVIOUS REGIONAL DISPUTE EXPERIENCE

The results thus far demonstrate that regional dispute experience across all member states has a positive effect on the likelihood of initiating a regional dispute in the future, relative to the likelihood of WTO dispute. Given the support for my first hypothesis on the stumbling block role of regional trade dispute settlement bodies, I move on to assess the robustness of the conditional effect of previous regional dispute experience on future forum choice. In this section, I interact this alternative measure of previous experience – the number of previous regional disputes initiated against the potential complainant by all other entities – with my measures of learning capacity – i.e., level of development, ratio of sector exports over total exports, ratio of sector exports to GDP, and the ratio of the potential complainant's GDP to the sum of the potential complainant and potential respondent's GDPs.[55] The results of these re-estimated models are found in tables 4.6 and 4.7.

**Table 4.7: Influence of All Previous Regional Dispute Experience on Trade Dispute Forum Choice, Conditional on Dyadic Relationship Component of learning Capacity**

| | Model 15 | | | Model 16 | | | Model 17 | | |
|---|---|---|---|---|---|---|---|---|---|
| | No Dispute | Regional Dispute | Both Forums | No Dispute | RTA Dispute | Both Forums | No Dispute | RTA Dispute | Both Forums |
| # Regional Disputes (MS) $_{ist-1}$ | 0.730*** | 0.746*** | -0.155 | 1.239 | 1.047 | -0.189 | 0.334 | 0.448 | 0.436 |
| | (0.221) | (0.231) | (0.670) | (3.000) | (2.964) | (2.735) | (0.386) | (0.394) | (0.417) |
| # Regional Disputes (MS) $_{ist-1}$ X Sector Exports $_{ij\ t-1}$/ Total Exports $_{ii\ t-1}$ | 0.292*** | 0.194** | -0.192 | | | | | | |
| | (0.102) | (0.100) | (0.176) | | | | | | |
| # Regional Disputes (MS) $_{ist-1}$ X Sector Exports $_{ij\ t-1}$/ GDP $_{i\ t-1}$ | | | | 0.0798 | 0.0543 | -0.0311 | | | |
| | | | | (0.245) | (0.243) | (0.224) | | | |
| # Regional Disputes (MS) $_{ist-1}$ X Power $_{ijt-1}$ | | | | | | | 0.190 | 0.131 | 0.163 |
| | | | | | | | (0.194) | (0.189) | (0.212) |
| # WTO Disputes $_{ist-1}$ | -1.19*** | -1.103** | -0.734 | -1.30*** | -1.127** | -0.927 | -1.369** | -1.207** | -1.202* |
| | (0.470) | (0.492) | (0.859) | (0.539) | (0.559) | (0.831) | (0.694) | (0.721) | (0.921) |
| # Third Party | -0.0497 | -0.101 | -0.0883 | -0.0431 | -0.0940 | -0.0876 | -0.0319 | -0.0822 | -0.0780 |

[55] To remain consistent with the models presented in the first section, these models do not include cubic splines. Additionally, the reference group is "WTO Dispute Initiated."

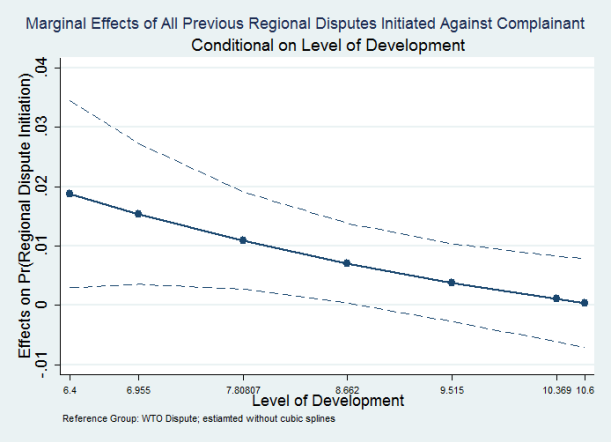
| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | (0.0768) | (0.0817) | (0.117) | (0.0839) | (0.0921) | (0.117) | (0.0754) | (0.0814) | (0.120) |
| Power | 1.013 | 0.925 | 2.155** | 0.881 | 0.798 | 2.253*** | 0.707 | 0.698 | 2.024** |
| | (1.067) | (1.053) | (1.037) | (0.992) | (0.976) | (0.817) | (1.030) | (1.017) | (0.885) |
| Ln GDP pc $_{it-1}$ | -1.532* | -1.684* | -2.504* | -1.437* | -1.559* | -2.409* | -1.451* | -1.615* | -2.491* |
| | (1.058) | (1.026) | (1.683) | (0.997) | (0.966) | (1.552) | (1.025) | (0.990) | (1.520) |
| Ln GDP pc $_{jt-1}$ | -2.16*** | -1.81*** | -2.27*** | -2.09*** | -1.73*** | -2.01*** | -2.04*** | -1.68*** | -1.87*** |
| | (0.708) | (0.709) | (0.814) | (0.682) | (0.693) | (0.817) | (0.651) | (0.654) | (0.702) |
| Ln Sector Exports $_{ij\ t-1}$/GDP$_{i\ t-1}$ | -0.440 | -0.231 | 0.819** | -0.536* | -0.301 | 0.973*** | -0.584* | -0.377 | 0.795** |
| | (0.345) | (0.363) | (0.380) | (0.331) | (0.348) | (0.392) | (0.360) | (0.375) | (0.397) |
| Ln Total Trade/ GDP $_{i\ t-1}$ | 3.579** | 2.668* | 2.956** | 3.480** | 2.589* | 2.933** | 3.481** | 2.611* | 3.037** |
| | (1.679) | (1.792) | (1.773) | (1.593) | (1.697) | (1.435) | (1.666) | (1.784) | (1.573) |
| Sector Exports $_{ij\ t-1}$/ Total Exports $_{ij\ t-1}$ | 0.717** | 1.058*** | 0.237 | 0.917*** | 1.170*** | -0.162 | 0.989*** | 1.247*** | -0.0619 |
| | (0.319) | (0.371) | (0.428) | (0.340) | (0.382) | (0.524) | (0.349) | (0.392) | (0.447) |
| Polity 2 $_{it-1}$ | 0.414* | 0.339 | 0.915 | 0.406* | 0.329 | 0.905* | 0.417* | 0.338 | 0.934* |
| | (0.293) | (0.286) | (0.739) | (0.297) | (0.291) | (0.698) | (0.273) | (0.266) | (0.636) |
| Polity 2 $_{it-1}$ | 0.868*** | 0.892*** | 0.542*** | 0.851*** | 0.873*** | 0.443** | 0.854*** | 0.876*** | 0.440** |
| | (0.194) | (0.202) | (0.222) | (0.186) | (0.194) | (0.207) | (0.185) | (0.194) | (0.213) |
| RTA Dispute $_{ijst-1}$ | -1.70*** | -0.362 | 1.368*** | -1.68*** | -0.315 | 1.183*** | -1.68*** | -0.331 | 1.077*** |
| | (0.506) | (0.486) | (0.488) | (0.515) | (0.485) | (0.356) | (0.513) | (0.478) | (0.313) |
| WTO Dispute $_{ijst-1}$ | -1.90*** | -0.407 | 1.991** | -1.923** | -0.456 | 1.709*** | -2.05*** | -0.556 | 1.602** |
| | (0.761) | (1.435) | (0.860) | (0.852) | (1.492) | (0.706) | (0.812) | (1.458) | (0.731) |
| Both Dispute $_{ijst-1}$ | -3.01*** | 0.170 | 0.913 | -3.10*** | 0.131 | 0.943 | -3.15*** | 0.122 | 0.981 |
| | (0.676) | (1.202) | (1.418) | (0.726) | (1.153) | (1.267) | (0.773) | (1.232) | (1.292) |
| CAN | 12.28*** | 13.09*** | -5.536** | 12.62*** | 13.56*** | -4.69*** | 12.47*** | 13.22*** | -4.699** |
| | (1.610) | (1.562) | (2.447) | (1.590) | (1.622) | (2.012) | (1.650) | (1.583) | (2.153) |
| MERC | -0.309 | 0.672 | -2.909* | -0.374 | 0.687 | -2.342* | -0.296 | 0.653 | -2.286* |
| | (0.813) | (0.976) | (2.009) | (0.834) | (1.006) | (1.694) | (0.829) | (0.988) | (1.654) |
| CACM | 6.630** | 6.079* | -11.6*** | 7.303** | 6.865** | -10.6*** | 7.142** | 6.510** | -10.4*** |
| | (3.935) | (3.948) | (4.227) | (3.793) | (3.852) | (3.786) | (3.721) | (3.730) | (3.881) |
| constant | 13.77 | 16.32* | 36.04*** | 11.75 | 14.00 | 34.88** | 10.57 | 12.99 | 31.39** |
| | (12.38) | (12.02) | (14.96) | (11.94) | (11.85) | (15.57) | (11.66) | (11.51) | (14.17) |
| N | | 3661 | | | 3661 | | | 3661 | |
| Pseudo $R^2$ | | 0.312 | | | 0.307 | | | 0.308 | |
| Log Pseudolikelihood | | -949.436 | | | -956.126 | | | -955.625 | |

Note: Robust standard errors in parentheses. P values are calculated for a one-tailed hypothesis test. Observations clustered by dyad. *p < 0.10, **p < 0.05, ***p < 0.01

Compared to the results in previous sections, I find very limited support for my expectations when looking to the coefficients associated with models 14 through 17 in tables 4.6 and 4.7. In many cases, both the component and interaction terms associated with previous regional dispute initiation experience fail to achieve statistical significance at conventional levels. Using the ability component of

learning capacity – i.e., the level of development – and two of the measures of the incentive component – the importance of dyadic exports in the subject area to the economy and the dyadic economic power disparities – neither the component or interaction terms predicting the effect of previous experience is able to attain statistical significance when predicting the likelihood of regional dispute initiation.[56] These terms remain statistically insignificant in the equations associated with the other dispute resolution outcomes. However, I find that previous experience has a positive and statistically significant relationship with the likelihood of initiating a regional dispute when learning capacity is measured as the importance of dyadic exports in the subject area relative to total dyadic exports. Further, this positive relationship exists when predicting the likelihood that no dispute is initiated, relative to the likelihood that a WTO dispute is initiated. This set of results provides some evidence for a stumbling block effect of regional dispute settlement bodies.

**Figure 4.11: Marginal Effects of All Previous Regional Disputes as Respondent, Conditional on Development**

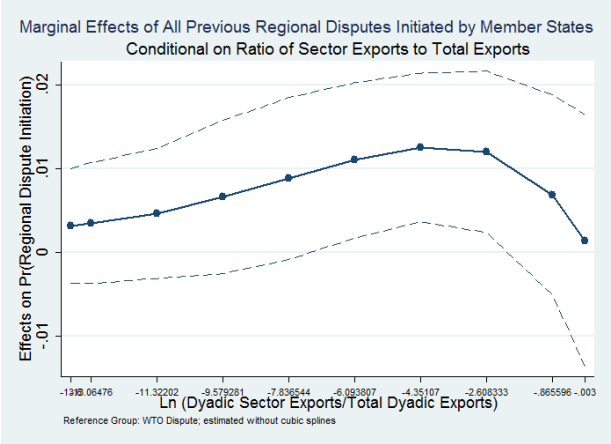



Although unable to achieve statistical significance in many of the relevant terms in these models, I am able to find that previous regional dispute experience does have a statistically significant and positive effect in some cases when examining the conditional marginal effects. Looking first to the marginal effects of the previous experience measure associated with model 14, which are reported in

[56] I use the measure of all regional disputes initiated by the member states and the organization for model 14, which operationalizes learning capacity as the level of development. The alternative measure – which counts only those disputes initiated by member states – failed to converge. I use the count of disputes initiated only by member states for the other measures of learning capacity.

figure 4.11, I find that previous regional dispute experience with all member states does increase the likelihood of regional dispute initiation in the future and that the magnitude of the effect varies with the potential complainant's level of development.[57] Specifically, the effect decreases as development level increases indicating that as a state's ability to learn decreases the effect of previous regional dispute initiation experience on the likelihood of initiating a regional dispute in the following year also decreases. Again I find that the effects are smaller than those associated with dyad-specific measure of experience used in the first section of this chapter. At the lowest level of development, an increase in the number of previous regional disputes initiated against the potential complainant is associated with a 1.87% increase in the likelihood of initiating a regional dispute. The marginal effects decrease to 1.09% at the mean of the complainant's GDP per capita and to 0.71% at one standard deviation above the mean.

**Figure 4.12: Marginal Effects of All Previous Member State Disputes as Respondent, Conditional on Ratio of Sector to Total Exports**

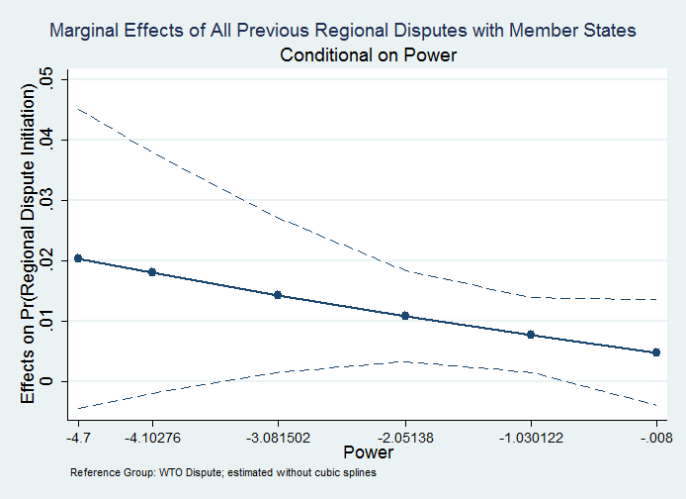



While I find support for the conditional effect of previous regional dispute experience using the level of development to capture learning capacity, I find weaker support when examining how the dyadic relationship influences the effect of learning from past endeavors. However, I still find evidence that supports the proposition that states learn from previous experience and choose to initiate future disputes regionally as a result of what is learned. When all previous dispute initiation experience is conditioned by the importance of subject area exports relative to total dyadic exports, the marginal effects, which are

[57] The conditional marginal effects are also reported in tables in appendix A.1.

reported in figure 4.12, demonstrate that an increase in previous regional dispute initiation experience is again shown to increase the likelihood that a state initiates a future trade dispute at the regional dispute settlement body.[58] Unlike previous results, the effect of previous experience does not increase linearly as learning capacity increases. Instead, an inverse-U relationship is observed with the marginal effects of previous experience associated with model 15.[59] Increased dependence on dyadic exports in the relevant subject area thus increases the effect of previous experience only up until a certain point. Just below the mean level of dependence, the effect of all previous dispute initiation experience with other member states begins to decrease.

**Figure 4.13: Marginal Effects of All Previous Member State Disputes as Respondent, Conditional on Power**




The final two measures of the dyadic relationship component of learning capacity provide mixed support for the expected relationships between previous regional dispute experience and future regional dispute initiation. The mixed support results, in part, from the fact that the marginal effects associated with all previous dispute initiation experience, when conditional on the potential complainant's overall economic dependence on dyadic exports in a particular subject area, are unable to achieve statistical

[58] The conditional marginal effects are also reported in tables in appendix A.1.
[59] At two standard deviations below the mean, one standard deviation below the mean, and the mean of sector to total exports, an increase in the number of disputes initiated by the members of the regional organization against the potential complainant in a particular subject area are associated with a 1.10%, 1.25%, and 1.20% increase in the likelihood of initiating a regional dispute against another RTA partner, relative to initiating a dispute against that partner at the WTO.

significance at all levels of the ratio of sector exports to GDP.[60] However, when the effect of previous dispute initiation experience is conditioned by the dyadic economic power disparities, the marginal effects are both positive and statistically significant, as seen in figure 4.13, which is similar to the results presented thus far.[61] Further similarities are observed when looking at the values of the marginal effects. Once more, as the incentive to learn decreases the amount of past experiences has a decreasing effect on using the same forum in the future. Specifically, as the complainant's economic power in the dyad increases the effect of previous regional dispute experience on the likelihood of future regional dispute initiation decreases.[62]

The results in this section demonstrate that it is not only intra-dyadic dispute experience that states learn from. A potential complainant uses information derived from all experiences to learn and update its dispute resolution infrastructure, which then makes the regional dispute settlement body more desirable to use in the future. Like other measures of previous regional dispute experience, the effect of all dispute initiation experience varies based on the potential complainant's learning capacity and the amount of previous experience.[63] Despite supporting the expected relationship between past experiences and future dispute initiation decisions, the results are not as robust as those associated with the long- and short-term dyadic dispute experiences measures. I expect that this is due to the fact that only certain pieces of information provided via previous experience can be applied across dyads. Overall, these results provide further evidence that regional dispute settlement bodies play a stumbling block role toward multilateral dispute resolution.

[60] For space considerations, I do not report the graphical representation of these marginal effects since they fail to achieve statistical significance at conventional levels. These conditional marginal effects are also reported in tables in Appendix A.1.
[61] These conditional marginal effects are also reported in tables in Appendix A.1.
[62] At the minimum, two standard deviations below the mean, and the mean levels, an increase in the number of disputes initiated is associated with a 2.04%, 1.44%, and 0.78% in the likelihood of initiating a dispute at a regional forum in the following year.
[63] The conditional marginal effects associated with the effect of all previous dispute experience conditional on learning capacity as all previous experience increases are reported in figure B.1.4 in appendix B.1. This figure demonstrates a non-linear relationship for these marginal effects. The marginal effect of each additional dispute increases until a certain level at which point the effects begins to decrease. A key difference in these results with those associated with the short-term dyadic measures of previous experience is that the inflection point is higher. Another key difference is the size of the marginal effects; the effects are much smaller than was the case for the dyad specific dispute experiences.

### 4.4.2 EFFECT OF TOTAL REGIONAL DISPUTE EXPERIENCE OVER THE LONG-RUN

As argued above, states are not limited to learning from only their immediate experiences. I also anticipate that there to be a cumulative effect of total experience as a respondent at a regional body. To demonstrate the effect of learning from all disputes initiated against a state over time, I re-estimate my primary models using a long-term measure of total regional dispute experience.[64] The results presented in this section again demonstrate that regional dispute experience is found to influence future forum choices. However, the effect is smaller and less robust than observed using alternative measures. Across the models looking at the effect within the same subject area, an increase in the number of regional disputes initiated by all member states against a particular state over a five years period is only able to attain statistical significance when accounting for the conditioning effect of learning capacity.[65]

The size and significance of the marginal effects of the long-run count of disputes initiated by all member states in a particular subject area are similar to those observed in previous sections. When considering the unconditional effect, an increase in the number of disputes initiated against a potential complainant is associated with a 0.17% increase in the likelihood that a regional dispute is initiated. Moving on to consider the conditional effect, the marginal effects provide an interesting understanding of how learning capacity influences learning from previous experience. Interestingly, a positive, yet non-linear, effect is observed in the marginal effects when previous experience is conditional on the importance of exports in a particular subject area to total exports.[66] The marginal effects exhibit a similar relationship to those above when cumulative total experience is conditioned by the economic power

[64] This I calculated as the sum of total experience over a five year period. For space considerations, these results are reported in Appendix A.
[65] Specifically, an increase in the cumulative number of member states disputes initiated against a potential complainant is positive and statistically significantly related to the likelihood of initiating a regional dispute in the future when this measure is conditional on the importance of exports in a particular subject area to total exports and the importance of exports in a particular subject area to GDP.
[66] When statistically significant, the marginal effects associated with total cumulative previous regional dispute initiation experience are 0.002, 0.003, 0.003, 0.004, 0.003, 0.001 at four standard deviations below the mean to one standard deviation above the mean, respectively.

disparities of the dyad; the magnitude of the marginal effects decreases as the potential complainant becomes relatively more powerful in the dyad.[67]

When looking at the cumulative general effect – i.e., all disputes initiated against a state, across all subject areas, over a five year period – an increase in the number of regional disputes initiated is negative and statistically associated with the likelihood of regional dispute initiation in the unconditional and conditional models.[68] However, the marginal effects demonstrate a statistically significant and positive coefficient for these models; an increase in the total number of disputes initiated against a particular state in the previous five years across partners and subject areas is associated with a 0.04% increase in the likelihood that a regional dispute is initiated in the future. Similar to the results presented thus far, the effect of previous regional dispute experience decreases as the complainant becomes relatively more economically powerful in the dyad, which is consistent with my expectations. As power increases, the marginal effect of cumulative general previous dispute initiation experience is associated with a 0.15%, 0.13%, 0.10%, 0.07%, 0.05%, and 0.03% increase in the likelihood of regional dispute initiation. Overall, these results presented in this section demonstrate that cumulative total experience – both within and across subject areas – is associated with not only dispute initiation but also the choice to initiate a regional dispute instead of utilizing the multilateral mechanism at the WTO dispute settlement body. However, I find that the size of the marginal effects of previous experience is again smaller than those observed when examining the effect within a particular dyad and subject area. Overall, this additional set of results demonstrates the robustness of my finding that the regional dispute settlement body plays a stumbling block role but that the effect varies based on learning capacity.

[67] An increase in the number of regional disputes initiated by all other member states against a particular state is associate with a 0.56%, 0.49%, 0.39%, 0.30%, 0.21%, and 0.13% increase in the likelihood of initiating a regional dispute in the future at minimum, one standard deviation above the mean, two standard deviations above the mean, three standard deviations above the mean, the mean, maximum levels of *Power*.

[68] Due to estimation problems, I only present the cumulative general effect when it is conditional on power asymmetries in the dyad in Appendix A.

## 4.5 Considering Alternative Mechanisms for the Relationship Between Previous Disputes and Forum Choice

Beyond learning, there are a number of different explanations as to why previous experience and the likelihood of regional dispute initiation may exhibit a positive relationship. These alternative mechanisms were described and theoretically rebutted in chapter two. In this section, I empirically consider and examine the validity of explanations associated with path dependence and the disparities in the costs of forums. In so doing, I discuss the empirical approaches I have taken to account and control for these alternative mechanisms and present evidence that undermines these alternative mechanisms as driving the empirical relationship between my two key variables.

One of the chief techniques used in the empirical analyses in this chapter to inhibit the ability of alternative mechanisms – specifically the path dependence explanation – to account for the relationship between previous experience and regional forum choice is inherent in the structure of my variables and the data. A primary concern in my empirical analysis is accounting for the importance of understanding the temporal effect of previous experience, i.e., that the past influences the present. The first alternative mechanism – path dependence – implies that the occurrence and timing of previous events is also important; it influences and constrains future behaviors. While this may be at play, I have structured my data to help instill confidence that I am examining the effect of learning and not path dependence. Specifically, I do this by examining the effect of dispute initiation experience as a respondent on the likelihood of initiating a dispute as a complainant.

By taking this approach, I remove potential previous forum shopping decisions that would influence and/or constrain the forum shopping choice under analysis. While the body used to resolve a dispute is the same, the means of participation are wholly different. As mentioned earlier, as a respondent, a state chooses neither the dispute initiated, the forum used, nor the timing of that initiation. In the measure of previous dispute initiation experience, the state is defending its trade policy or action. My dependent variable – the measure of forum choice and dispute initiation – captures instead the state's

role as a complainant where it is accusing another state of implementing a trade policy or action that is non-compliant with its obligations as a member of the regional arrangement. Utilization of the regional dispute settlement body in each particular role is representative of two distinct actions: internal examination of one's own policies and the related response versus eternal examination of the policies of another state and the related response. The key differences in participation in the relevant roles prevent a state from exactly replicating previous efforts onto future endeavors. Despite the differences in roles, decision-making, and approaches in the measure of previous and future regional dispute experiences, it remains important to demonstrate and ensure that path dependence is not playing a key role in the observed positive relationship between these variables.

One empirical effort used to address this problem is observed in the models estimated using a cumulative measure of dispute initiation experience. My cumulative measure of dispute resolution experience at the available regional alternative looks at the effect over a five year period. While it does not explicitly account for the timing of disputes and their influence on future forum choices, this method groups together the key independent variable to try to minimize the effect of timing. Across these results, a consistent positive relationship is observed, indicating that discounting the importance of time does not influence my results. This method provides an additional means to independently test learning and weaken the claim that path dependence is driving the results.

Similarly, I control for potential path dependence and enhance the confidence that my results reflect a learning mechanism by including control variables that account for dependence of dispute initiation patterns over time. First, I include a lagged dependent variable in all of the models estimated in order to account for short-term dependence over time. This would include disputes that are initiated regionally in retaliation. Second, I include cubic polynomials to account for dependence over time in the models estimated and reported in appendix A.1. Across these models, I find a consistently positive and statistically significant relationship between previous regional dispute experience and the likelihood of future regional dispute initiation, holding dependence over time constant. These empirical endeavors provide further evidence that path dependence does not play a key role in understanding this relationship.

However, one might argue that these endeavors only provide a limited empirical solution to the problem presented by this potential alternative mechanism. In order to quell concerns that the relationship is not driven by learning and instead driven by path dependence, I have re-estimated my models using a stratified Cox regression model to account for the potential that the risk of failure – i.e., RTA dispute initiation – is conditional on time and the repeated occurrence of regional dispute initiation over time.[69] I estimate two stratified Cox models, one which examines if the underlying risk is conditional on time since entry into the sample and one that is conditional on time since the previous regional dispute was initiated. In both of these models, I stratified the sample by risk group; specifically, I account for whether the dyad in a particular year and subject area are at risk of their first, second, or $n^{th}$ failure event.

In using this method, I test my hypotheses using both the short- and long-run measures of previous dyadic regional dispute experience.[70] Across these models, I find that an increase in the number of regional dispute initiation experiences is positive and statistically significantly associated with the risk that a regional dispute is initiated in the future. This set of results demonstrates that the positive relationship between previous regional experience and future regional forum choice remains even when accounting for a change in the risk propensity as a result of repeated events. Although these results demonstrate that the risk of failure, i.e., regional dispute initiation, increases as the amount of previous experience increases, the effect is fairly small. The coefficient also decreases in size when comparing the short-run to the long-run measures of previous regional dispute experience. Overall, these results indicate that the relationship remains even when accounting for dependence of dispute initiation over time

The inclusion of these empirical methods to account for time increases my confidence that the learning mechanism posited in my argument is the primary explanation for the positive relationship between previous regional dispute experience and future regional dispute initiation and, in the process, discounts the argument that path dependence is the mechanism driving this relationship. These methods

[69] Box-Steffensmeier and Zorn (2002).
[70] These models are reported in appendix A.1

also help to increase confidence that the cost of the regional forum is not driving the positive relationship between previous use and future forum shopping choices. In my discussions above and in previous chapters, I demonstrate that the regional body is relatively less expensive than the dispute settlement body of the World Trade organization in terms of litigation costs but is simultaneously characterized by higher levels of uncertainty; further, states have the ability to increase litigation capacity over time with repeated experiences.[71] Based on the decreasing levels of uncertainty and litigation costs for each additional dispute, and diffusion of litigation costs of existing disputes over time, I would expect that the magnitude of the positive effect would increase over time if costs were the mechanism driving the decision to initiate regionally.

In contrast, we see from the results presented above that the magnitude of the effect decreases when considering the long-run effect. Further, the descriptive statistics – as reported in figure 3.3 – demonstrate a decrease in the use of regional bodies over time for each of the regional bodies in the data set. This result is consistent with the learning mechanism posited above but does not provide support for a mechanism tied to the disparities in litigation costs between regional and multilateral dispute settlement bodies. This is due, in part, to the asymmetries in uncertainty that decrease the allure of a regional body as well as the fact that the regional dispute settlement body is not the least costly dispute resolution alternative *overall*. A state would face a lower level of litigation costs if it resolved its dispute outside of the formal dispute resolution mechanisms. However, dispute resolution outside of formal institutions faces the same problem as a regional dispute resolution: high levels of uncertainty about unobservable costs and outcomes of dispute settlement, which contribute to potential future costs and considerations.

Repeated use of the formal dispute settlement mechanisms can help reduce uncertainty regarding the interests and objectives of the trade partner, which allows a state to reduce uncertainty associated with bilateral negotiations to resolve a dispute outside of a regional body. Thus, the cost-mechanism helps to explain a different manifestation of the stumbling block phenomenon – i.e., the role of repeated use in contributing to use of methods outside of formal mechanisms to resolve disputes – but is less effective in

[71] Refer specifically to section 2.4 in chapter two and see, among others, Davis and Bermeo (2009).

explaining repeated use of a regional body over time when alternatives to dispute resolution exist. Overall, the empirical results demonstrate that these mechanisms fail to provide a convincing explanation for the robust relationships presented in my results. At best, these alternative mechanisms play a limited role in understanding state use of a regional dispute settlement body, given that a multilateral alternative exists.

## 4.6 Alternative Explanations of Forum Choice

While the discussion thus far has persuasively demonstrated that previous regional dispute experience influences future forum choice in international trade disputes, previous research has also established that this is not the only factor that influences this choice. In this section I assess the support for these alternative explanations observed in the models estimated in previous sections. Specifically, I examine the effect of other informational sources, dyadic economic characteristics, and regime type of the disputants. First, the effect of alternative sources of information available to a state is a potentially important explanatory factor for forum choice. This is based on the fact that a state can use and learn from these alternative experiences to increase its litigation capacities, reduce the costs, and increase the benefits associated with resolving a dispute at a regional dispute settlement body. I expect that the most useful alternative source of information will come from experiences at the WTO dispute settlement body.[72] I measure the alternative sources of experience at the WTO as experience as a respondent or third party in disputes before the WTO dispute settlement body. These measures are, respectively, a count of the number of disputes initiated against the potential complainant by another member state of the regional body at the WTO and the number of disputes a potential complainant participated in as a third party in the previous year.

Across all models and specifications, I find that while third party participation has no relationship with the likelihood of a state choosing any of the forum choice alternatives, participation as a respondent

[72] See, among others, Davis and Bermeo (2009).

in a WTO dispute influences future forum choice.[73] Increasing amounts of previous WTO dispute experience is associated with a decrease in the likelihood of initiating a dispute at each of the dispute resolution alternatives, including a regional body, relative to the likelihood of initiating a dispute at the WTO. This relationship remains across conditional and unconditional models as well as different measures of previous regional dispute initiation experience.[74] This result demonstrates that while a state has alternative sources of experience to learn from, each form of experience does not have the same positive effect on each of the forum choices in the future.

Beyond alternative sources of information to learn from, a potential complainant's forum shopping decision can be influenced by the economic characteristics of the members of the dyad, which can influence the relative costs and benefits associated with initiating a trade dispute at a particular forum.[75] While included as a conditional element in some models, the level of development can independently influence the likelihood of dispute initiation. Across all models and specifications, I find that a potential complainant is less likely to initiate no dispute, a regional dispute, and disputes at both forums, relative to the likelihood of initiating a WTO dispute, as the potential respondent's level of development in the previous year increases. This same relationship exists for the complainant's GDP per capita for nearly all models. The level of development of each of the disputants is not the only measure of the dyad's economic characteristics expected to influence forum choice outcomes; the relative economic size of the complainant is also expected to influence forum choice.[76] I expect that the disparities in the size of the economies, which is measured by $Power_{ijt-1}$, can influence forum choice based on compliance considerations and retaliatory concerns. Across all my models, as the complainant becomes relatively more economically powerful in the dyad, the likelihood of initiating disputes at both forums increases.

[73] One exception to this is in the unconditional long-term model of previous dispute experience and the conditional model using the level of development to capture learning capacity. In these models, an increase in third party experience is associated with a decrease in the likelihood a regional dispute is initiated, relative to the likelihood that a WTO dispute is initiated.
[74] The only time where this model fails to achieve statistical significance is when predicting the likelihood of dispute initiation at both forums in model 14, 15, and 16.
[75] For research on the role of capacity constraints of WTO dispute initiation see, among others, Davis and Bermeo (2009), Guzman and Simmons (2005), Huerta-Goldman (2010).
[76] See, among others, Gomez-Mera and Molinari (2013).

In addition to these economic characteristics, from existing literature I expect that the dyadic trade relationship will influence trade policy and precedent setting preferences, which will influence where and whether or not to initiate a trade dispute.[77] My expectation is that increasing dependence on trade will increase the appeal of regional trade dispute settlement bodies. I test this alternative explanation using three measures: the importance of dyadic exports in a subject area relative to total dyadic exports; the importance of dyadic exports in a subject area relative to GDP; and the ratio of trade to GDP. The first of these measures – which captures the importance of exports in a subject area as a component of total dyadic exports – plays a key role in dispute initiation and forum choice. Across all models, an increase in the importance of dyadic exports in the particular subject area is associated with an increase in the likelihood that no dispute or regional dispute are initiated, relative to the likelihood of initiating a dispute at the WTO. The second measure of the importance of trade – the ratio of dyadic exports in a particular subject area to GDP – does not have the same consistent relationship across the models. Across most models, an increase in the importance of exports in the subject area to the overall economy is associated with a decrease in the likelihood of initiating no dispute and an increase in the likelihood of disputes being initiated at both forums but fails to achieve statistical significance when predicting the likelihood of a regional dispute, relative to the likelihood of initiating a multilateral trade dispute. Overall, these results indicate that an increase in sector exports relative to GDP increases the incentives of a state to choose a multilateral path to resolve disputes, either alone or in combination with regional endeavors.

The final measure of trade importance, the ratio of the complainant's total trade to the complainant's GDP, examines the influence of trade, in general, in the potential complainant's forum shopping decision. When assessing the short-term effect of previous regional dispute experience, an increase in the importance of all trade to the potential complainant's economy is associated with an increase in the likelihood of each outcome of interest, relative to the likelihood of initiating a dispute at the WTO. When using the long-term measure of previous experience, however, this variable is only

[77] See, among others, Busch (2007).

positively associated with the likelihood of initiating no dispute and the likelihood of initiating disputes at both the regional and multilateral forums. Unlike these results, the importance of overall trade is not found to be statistically significantly associated with the likelihood of initiating a regional dispute in models estimating the long-term effect of regional dispute initiation experience.[78]

Previous research has also demonstrated that it is not just the economic characteristics and relationships that can influence dispute initiation and forum choice. To account for this, I have included measures to capture the regime type of disputants. Regime type is expected to influence forum shopping calculations based on domestic institutional barriers to dispute initiation and potential domestic audience costs for doing so. Like the economic measures above, these political variables also exhibit a relationship with forum choice. Across all models, the likelihood of all outcomes of interest increases, relative to the likelihood of initiating a dispute only multilaterally, as the potential respondent becomes more democratic. Across nearly all models the likelihood that no dispute is initiated and the likelihood that disputes are initiated both regionally and multilaterally increases, relative to the likelihood of initiating only a dispute at the WTO, as the potential complainant's level of democracy increases. The effect of the complainant's level of democracy on regional dispute initiation, in contrast, varies based on the equation and specification. An increase in the potential complainant's level of democracy is only associated with an increase in the likelihood that a regional dispute is initiated in a handful of models. These results demonstrate that increasing levels of democracy influence not only the decision to initiate a dispute but also which forum is most preferred when trying to resolve an international trade dispute.

In these models, I also assess whether or not the available regional alternative has an influence on forum choice in international trade disputes. It is important to consider the effect of each of the regional bodies because of the key institutional differences across the regional alternatives and over time. Specifically, these bodies vary in terms of the level of legalism – including an appeals procedure – and in the ability to have competing jurisdictions. These elements have also varied over time, as some of the regional bodies have updated and enhanced their dispute resolution mechanism. For example, the dispute

[78] There is one exception: the coefficient is statistically significant for the "regional dispute" equation in model 9.

settlement mechanism of the Mercosur has been adapted through the Brasilia, Ouro Preto, and Olivios Protocols to expand dispute resolution beyond direct negotiations to become an institution that includes a standing body and appeals mechanism in the Permanent Review Tribunal as well as a means to prevent from having disputes at multiple forums. Each of these alterations are relevant for understanding forum choice because they can, for example, influence the relative costs and benefits associated with dispute initiation and, as a result, the likelihood of each dispute resolution alternative.

Across all models, the effect of each of the regional trade organizations is assessed relative to the effect of the North American Free Trade Agreement (NAFTA) on the choice to initiate a dispute and the forum used in the dispute. In so doing, I assess these dispute settlement bodies relative to a regional body that lacks a standing body and has only an extremely limited means of appeal. Across nearly all models, I find that membership in the Andean Community (CAN) and Central American Common Market (CACM) are statistically significantly related to all of the forum choice alternatives.[79] Membership in the Common Market of the South (MERCOSUR), however, is only related to the likelihood of initiating both regional and multilateral disputes.[80] Membership in CAN and CACM, relative to membership in the NAFTA, is associated with an increase in the likelihood of not initiating a dispute and initiating a dispute at the regional body, relative to the likelihood of initiating a dispute at only the WTO. Being a member of the MERCOSUR also demonstrates a stumbling block effect of regional dispute settlement bodies; however the effect is not as strong. Relative to the effect of membership in NAFTA, being a member of the MERCOSUR is associated with a decrease in the likelihood that both regional and multilateral disputes are initiated. Combined, these results indicate that, relative to membership in the NAFTA, membership in these Latin American regional trade organizations increases the incentives to utilize a regional dispute settlement body *instead* of the multilateral alternative.

[79] Membership in the Central American Common Market only fails to achieve statistical significance in models 8 and 11 when predicting the likelihood that no dispute is initiated and a regional dispute only is initiated.
[80] In model 2, which estimates the unconditional effect of previous experience across subject areas, membership in MERCOSUR is associated with a decrease in the likelihood that no dispute is initiated, relative to the likelihood that a WTO dispute is initiated, relative to the effect of the NAFTA.

Based on the reference group, this result provides us insight on the role of the institutional characteristics on forum choice. Consider, for example, the roles that these institutions play. At the Andean Community, the dispute settlement body plays multiple roles. One role that can be played by the General Secretariat is to issue investigatory decisions; it can administer an administrative ruling on the existence of dumping, for example, and authorize measures to address this. In contrast, the NAFTA does not engage in such a role. The investigatory responsibilities lie in the hands of the respective domestic authorities, e.g., the US Department of Commerce (DoC) and/or International Trade Commission (ITC), the Canadian International Trade Tribunal (CITT), and the Mexican Secretaría de Economía (SECOFI). The ability to utilize a body to investigate, adjudicate, and authorize remedies for a potential violation in trade law may generate fewer contestations on policies implemented to remedy a perceived breach, which would eventually lead to dispute resolution at the WTO. Such a distinction between the CAN and NAFTA indicates that simply being a member to a particular body can potentially decrease the need for use of the WTO. Overall, the results observed with these controls for available regional forums indicate that not only do institutional facets matter, but membership in a regional body comprised primarily of developing countries does not unilaterally decrease the likelihood of utilizing a regional body.

## 4.7 CONCLUSION

This chapter has demonstrated robust evidence for the stumbling block effect of regional dispute settlement bodies. Specifically, the evidence presented herein suggests that while a state uses its prior regional dispute experiences to build up knowledge and expertise by initiating a greater number of disputes at the regional body in the future it does not utilize that expertise in a way that increases the use of the WTO dispute settlement body. Across all models, I found that not only does regional dispute experience increase the likelihood of regional dispute initiation in the future relative to the likelihood of using only the WTO to resolve disputes, but also that WTO experience is not used to build up regional litigation capabilities. Information and skills acquired via regional dispute settlement leads to further regional dispute resolution endeavors. Furthermore, I have demonstrated robust support for my

proposition that learning capacity matters. This was done through the models where previous experience was interacted with measures of learning capacity. In each of these models, the marginal effects of previous experience took on a positive and statistically significant sign. Additionally, the sizes of these marginal effects vary in line with the extent of a state's learning capacity.

Further, I find that the stumbling block effect of regional dispute settlement bodies holds when considering how the effect varies as the amount of experience increases. Having too much on one's plate influences the ability of an actor to garner deep and meaningful information about the experience it is a part of. With a greater amount of previous experience, a state may acquire a larger quantity of information but its effect in the future may be diminished. This can be due to the fact that the information may be of high quantity but low quality and/or gathering such quantity of information and learning from it places resource constraints on a state in the future which inhibit its ability to utilize any international trade dispute resolution forum. The findings presented in my appendix also demonstrate that the effect of each amount of previous regional dispute experience also varies based on learning capacity in the expected manner. Increasing the disputes litigated increases the resources required to do so; this will influence both the incentive and ability to cull information from experiences and learn as well as the relative costs and benefits of each forum choice in future disputes.

Beyond the strong support for the stumbling block effect of regional dispute settlement bodies presented by these results, I also demonstrate that previous experience, conditional on learning capacity, provides the best explanation for forum choice. Looking to the alternative explanations posited by the literature, I find some mixed support. In short, expectations on the effect of economic and political characteristics do not demonstrate the same overwhelming evidence as to why a state would choose to go regional when a multilateral alternative exists to resolve disputes. In the next chapter, I will further delve into my results to examine whether the effects observed in this chapter are simply due to dyadic communications and interactions. In so doing, I will assess the true stumbling block role played by the institution itself. I accomplish this by focusing on a more specific part of the dispute resolution experience: the decisions issued by the regional dispute settlement body.

## 5.0 Effect of Decisions in Previous Disputes on Choice of Regional Forum

The last chapter provided the first set of evidence to support the idea that previous dispute experience influences the likelihood of choosing a regional dispute settlement body to resolve a dispute *instead of* the multilateral alternative available at the WTO. Using newly collected data on 1,245 disputes initiated by a member state at the dispute settlement mechanisms of the Andean Community (CAN), Central American Common Market (CACM), Common Market of the South (MERCOSUR), North American Free Trade Agreement (NAFTA), and the World Trade Organizations (WTO) between 1995 and 2010, I demonstrated that overall experience at a regional dispute experience in the past plays a role in a state's forum choice in future trade disputes. In these analyses, I examined the effects of the number of previous dispute experiences in the previous year in the same subject area, across subject areas, and over a short- and long-term period. Each of these measures demonstrated that an increase in previous regional dispute experience is associated with an increase in the likelihood of regional dispute initiation in the future. These results also showed a conditional relationship; I found that the effect is conditioned by a state's learning capacity, which is determined by its economic and legal resources as well as its economic relationship with other member states in the regional arrangement. These findings support the proposed stumbling block effect of regional dispute settlement mechanisms. Specifically, use of a regional body leads to further use of that regional body, instead of a move toward multilateral resolution of trade disputes. Learning from previous experience at a regional body, which reduces costs and uncertainty, is shown to be associated with a decrease in the incentive to use the multilateral alternative available at the WTO.

However, the results in the previous chapter have a key limitation that inhibits the ability to confidently proclaim that there is a stumbling block effect of regional trade dispute settlement bodies. In the previous chapter, the measure of previous regional dispute experience only captures one element of the multifaceted dispute resolution process: initiation. Measuring previous experience in this way

captures both the diplomatic consultations between relevant parties within the organization as well as the independent effect of the institution itself. In order to accurately assess the relationship between previous regional dispute experience and future regional dispute initiation – i.e., the stumbling block effect of regional dispute settlement bodies– it is necessary to understand the *independent* effect of the regional body on future forum choices in international trade disputes. To do so, I rethink my understanding of previous regional dispute experience in this chapter by looking at the effect of decisions issued in a prior dispute.

Looking solely at initiation provides a shallow understanding of learning, previous dispute experience, and future forum choices. Limiting analyses to this conceptualization is similar to trying to assess a student's knowledge of calculus by the number of times he/she goes to school in a year without looking at the frequency of student attendance and magnitude of attention in that particular class. It is important to examine the effect of the number of decisions issued to fully understand the stumbling block effect of regional dispute settlement bodies because, first, different types of learning can occur in the ruling phase relative to the initial consultation phase immediately following a state's initiation of a dispute. When a dispute passes the initial phases of trade dispute resolution at these bodies – the identification of a potential violation and the initiation of a dispute – to reach the ruling phase – where the panel issues its ruling on the measure at the heart of the dispute – a state can learn about the nuances associated with the elements of resolving trade disputes at these international dispute settlement mechanisms. Specifically, a state can greatly reduce its uncertainty over potential outcomes as it gathers insight into how the dispute settlement body interprets and applies relevant international law.

A second key reason to assess the effect of decisions issued in previous disputes to get at the stumbling block effect of regional dispute settlement bodies is derived from the fact that disputes that are initiated do not always reach the ruling phase. Of the disputes used to create this data set, 46.9% of RTA and 57.9% of WTO disputes, respectively, have at least one decision issued. Just like all disputes are not alike – insofar that all disputes do not reach the decision phase – the decisions that are issued also exhibit a number of dissimilarities that can influence the choice of where, and whether or not to, initiate a dispute

in the following year. This is the third key reason it is important to analyze decisions to fully understand and assess the stumbling block effect of regional dispute settlement bodies. At the NAFTA dispute settlement mechanism, for example, 34.2% of the decisions issued held that the policy or practice implemented by the respondent was inconsistent with the NAFTA rules and regulations, 29.9% of the decisions held that the policy/practice was consistent with these NAFTA obligations, and 34.2% of these decisions found elements both consistent and inconsistent.

In this chapter I test my hypotheses that previous experience increases the likelihood of regional dispute initiation, that this relationship is conditional on learning capacity, and that there are diminishing returns on increasing amounts of previous regional dispute experience by operationalizing previous experience as the number and type of decisions issued in a prior dispute. Similar to the analyses in the previous chapter, I examine the effect of the number of decisions issued in previous disputes on forum choice within the proper context; if a state chooses to initiate a regional dispute it simultaneously chooses to not resolve the dispute in another way or at another forum.[1] I first demonstrate the effect of previous experiences, in general, and then move on to expand upon these analyses by looking at the effect of different types of decisions on forum choice. In this section, I provide the first empirical examination of the effects of different *types* of decisions. I assess the effect of three types of decisions; each captures the degree of support for each litigant's position in the dispute. The first type, the "affirm" type, is a ruling completely in favor of the respondent while the second type, the "remand" type is a ruling in favor of the complainant. The final type, "mixed" decisions, captures those rulings between these two extremes.

Measuring previous regional dispute experience as the number and type of decisions issued in these regional disputes provides a number of interesting results. Varying the understanding of previous regional dispute experience to capture a particular aspect of this experience provides support for the three hypotheses stated above. Looking at the amount of decisions issued in disputes in the previous year, I find that a positive and conditional relationship exists between previous experience and regional forum choice in future disputes. Specifically, the results below demonstrate that an increase in the number of

[1] To do so, I again estimate my models using multinomial logit.

decisions issued is associated with an increase in the likelihood of initiating a regional dispute in the following year. Additionally, I find that this relationship is conditioned by learning capacity. Using measures of the level of development, the ratio of sector exports to total exports, the ratio of sector exports to GDP, and economic power disparity in the dyad to proxy learning capacity, I find that the marginal effects increase as each measure of learning capacity increases. The first of these measures captures the ability to learn and update a dispute resolution infrastructure while the latter three capture the incentive to learn from previous experiences.[2] When assessing the effects of different types of decisions, I find more limited support for my expectations. Overall, the results in this chapter provide further evidence that previous regional disputes experience influences not only future forum choice but also the likelihood that a state will utilize the available regional alternative to resolve international trade disputes even though a multilateral alternative exists at the WTO.

## 5.1 Previous Decisions in Regional Trade Disputes and Future Forum Choices

In resolving a trade dispute at a regional or multilateral trade dispute resolution forum there are a number of different phases that the process goes through. While the specifics of the phases may vary across institutions, most include a phase for formal discussions that can lead to litigation heard and adjudicated by a formal body. While the previous chapter captured the effect of the process as a whole, in this chapter I focus on the decisions issued by the formal body or bodies of the regional organization in order to parse out the true effects of the institution on future forum shopping decisions. The decisions issued by the regional bodies provide a member state with information it can use to learn about the legality of its policy, the specifics of how it was or was not inconsistent with the relevant laws of the

[2] Recall from chapter two that I expect the level of development to determine the ability to learn because states with higher levels of development have more sophisticated dispute resolution infrastructures prior to engaging in a dispute at the regional bodies. For more developed countries, the expectations on costs and outcomes associated with using these bodies are expected to be closer to the observed outcomes. As such, there is much lower degree of potential learning that can occur for these types of states. The final three measures capture the incentive to learn from experiences. First, states with greater dependence on trade relations with their partners are likely to want to minimize potential disruptions to those trade flows. The incentive to learn increases as dependence on trade increases because states have a greater interest in resolving disputes quickly and effectively. Second, economic power disparities influence a state's incentive to learn based on disadvantages faced at these regional dispute bodies.

organization, and/or the procedures of the dispute resolution system. This information can be useful to a state because it can help reduce the uncertainty surrounding the outcome of the dispute. The information gathered can be applied in a state's future estimates of the costs and benefits associated with dispute resolution at the relevant international trade dispute resolution forums to generate more accurate expectations.

**Table 5.1: Hypotheses**

*Hypothesis 1:* An increase in the amount of regional dispute settlement experience is associated with an increase in the likelihood of utilizing a regional dispute settlement body in the future.

*Hypothesis 2:* The positive effect of an increase in that state's regional dispute experience on the likelihood of future regional dispute initiation will increase as a potential complainant's learning capacity increases.

*Hypothesis 3:* The positive effect of an increase in the amount of a state's previous regional dispute experience on the likelihood of future regional dispute initiation will increase as a potential complainant's previous experience increases up until a certain point and then the effect will begin to decrease.

To assess the effect of the ruling phase of previous dispute experience on future forum shopping choices – and the resulting stumbling block effect of regional dispute settlement bodies – I re-examine the hypotheses summarized in table 5.1, which are derived in chapter 2, using measures of previous experience that capture the unique effect of the dispute settlement body. The first measure used to capture the institution's role in future forum choices is the number of decisions issued in regional disputes initiated against a potential complainant in the previous year. To capture the number of decisions issued and the effect on regional forum choice, I look at each of the disputes included in my data set to see if, and when, decisions are issued for that dispute. The measure $RTA\ Decisions_{is\ t-1}$ is a count of the number of decisions issued in a dispute initiated against the current potential complainant, state *i*, in the previous year in a particular subject area *s*. Beyond the differences originating from the aspect of previous regional dispute experience being captured, this measure varies in a number of key ways from the measure used in chapter four, which captures general previous regional dispute experience.

One key difference between the measure capturing decisions issued and the measures in the previous chapter is that I do not calculate a dyad-specific count of decisions issued in regional disputes.

Individual decisions are not issued based on each unique dyad in the dispute. As a result, the measures associated with the counts of decisions in regional disputes are the total number of decisions issued in disputes initiated against a potential complainant by all members of the regional arrangement. Second, multiple decisions can be issued in a single dispute. The decisions included in this count are not limited to only the first decision issued by a relevant RTA body; this measure includes all decisions issued. This would include, for example, both initial and redetermination on remand decisions at the NAFTA as well as investigation and merit decisions at the Andean Community dispute settlement bodies. I expect to see the same relationships between previous experience – as measured by the number of decisions – and forum choice as those expected and seen with the general measure of previous dispute experience. Specifically, I expect that an increase in the number of previous regional decisions issued is positively associated with the likelihood that a regional dispute is initiated in the following year. Further, I expect that this positive effect varies; the effect of previous decisions will increase as learning capacity increases. Like the models in chapter four, I test my expectations using a count of decisions in a particular subject area and across subject areas as well using a cumulative measure of the number of decisions issued.[3]

Before assessing the effect of previous decisions, *ceteris paribus*, it is first important to establish the basic relationship between the number of decisions issued and a state's forum shopping decision. To do so, I estimate a simplistic model of the relationship with my key explanatory variable – the number of decisions issued – and only a few key control variables.[4] Included in these models is a measure of the number of disputes initiated in the previous year, in order to assess the independent effect of the number of decisions issued on forum choice. Across these models, a relationship becomes clear; yet it fails to attain overwhelming support. I find that the number of decisions issued in regional disputes in the previous year influences both the likelihood of initiating disputes and where those disputes are initiated.

[3] Tables and figures associated with the count of decisions across subject areas and over a five-year period are reported in appendices A.2 and B.2.

[4] For space considerations, these models are reported in appendix A.2. The unit of analysis for these models is dyad-year-subject. Although a general model at the country-year level would be useful to identify the general relationship between previous experience and future state behavior, I encountered estimation difficulties that prevented me from including results from these types of models. The baseline reference group for these models is "no dispute initiated" to make them consistent with the models in this chapter. Estimating a simplified model with "WTO Dispute" as the reference group provides similar results.

While the significance varies, I find that an increase in the number of decisions issued is associated with an increase in the likelihood of dispute initiation at only the regional forum or at both the regional and multilateral forum in the following year.

What is even more striking about the results from these simplified models is that the marginal effects of previous decisions issued on the likelihood of regional dispute initiation exhibit a consistent and positive coefficient. When holding constant only the alternative pathways for learning and the regional body available to resolve a dyadic trade dispute, I find that an increase in the number of decisions issued in a regional dispute is associated with a 0.08% increase in the likelihood of regional dispute initiation in the following year. The magnitude of the effect decreases, however, when refining the model to include the potential complainant and respondent's level of development, a lag of the dependent variable, and cubic polynomials to account for dependence over time. In this model, the marginal effects demonstrate that an increase in the number of decisions issued is associated with a 0.56% increase in the likelihood of regional dispute initiation in the future. When accounting for the conditioning effect of the level of development, the marginal effects in the simplified model again demonstrate that learning capacity matters; the marginal effects of the number of previous decisions issued decrease as the level of development increases.[5] Overall, these results provide confidence that there is an underlying independent effect of decisions on the decision to initiate a dispute and forum shopping behavior.

**Table 5.2: Influence of Previous RTA Decisions Issue in the Same Subject Area**

| | Model 1 | | | Model 2 | | |
|---|---|---|---|---|---|---|
| | RTA | WTO | RTA & WTO | RTA | WTO | RTA & WTO |
| # RTA Decisions $_{i\,s\,t-1}$ X GDP pc $_{i\,t-1}$ | | | | -0.00788 | -0.0434 | -0.258* |
| | | | | (0.0550) | (0.293) | (0.173) |
| # RTA Decisions $_{i\,s\,t-1}$ | 0.270*** | 0.156 | 0.888*** | 0.334 | 0.585 | 3.462** |
| | (0.0548) | (0.219) | (0.223) | (0.434) | (3.047) | (1.533) |
| # WTO Decisions $_{i\,s\,t-1}$ | -0.0310 | -24.91*** | -33.38*** | -0.000920 | -20.78*** | -27.42*** |
| | (0.266) | (2.528) | (4.429) | (0.398) | (3.127) | (5.177) |
| # RTA Disputes $_{i\,s\,t-1}$ | 0.0779* | -0.0828 | 0.0794 | 0.0774* | -0.0829 | 0.0811 |

[5] These marginal effects lose statistical significance above two standard deviations above the mean. Respectively, the marginal effects demonstrate that an increase in the number of decisions issued is associated with a 0.70%, 0.65%, 0.57%, 0.497%, and 0.43% increase in the likelihood of initiating a regional dispute.

| | | | | | | |
|---|---|---|---|---|---|---|
| | (0.0573) | (0.189) | (0.0756) | (0.0570) | (0.192) | (0.0802) |
| # WTO Disputes $_{i\,s\,t-1}$ | -0.0276 | 1.400** | 1.960** | -0.0118 | 1.397** | 1.857** |
| | (0.208) | (0.765) | (0.885) | (0.216) | (0.772) | (0.903) |
| # Third Party $_{i\,t-1}$ | -0.0849*** | 0.0673 | -0.0603 | -0.0845*** | 0.0664 | -0.0783 |
| | (0.0321) | (0.0922) | (0.113) | (0.0320) | (0.0918) | (0.109) |
| Power $_{ij\,t-1}$ | -0.0465 | -0.723 | 1.588*** | -0.0462 | -0.727 | 1.688*** |
| | (0.0935) | (1.111) | (0.497) | (0.0935) | (1.141) | (0.463) |
| GDPpc $_{i\,t-1}$ | -0.189 | 1.693* | -2.044** | -0.181 | 1.704* | -2.166** |
| | (0.150) | (1.056) | (1.076) | (0.176) | (1.166) | (1.230) |
| GDPpc $_{j\,t-1}$ | 0.367*** | 2.644*** | -0.505* | 0.368*** | 2.638*** | -0.616** |
| | (0.125) | (0.589) | (0.345) | (0.124) | (0.593) | (0.347) |
| Sector Exports $_{ij\,s\,t-1}$ / Total Exports $_{ij\,t-1}$ | 0.229** | -0.782** | -1.817*** | 0.229** | -0.782** | -1.963*** |
| | (0.102) | (0.409) | (0.556) | (0.102) | (0.412) | (0.533) |
| Sector Exports $_{ij\,s\,t-1}$ / GDP $_{i\,t-1}$ | 0.242*** | 0.419 | 2.360*** | 0.241*** | 0.418 | 2.490*** |
| | (0.0752) | (0.393) | (0.382) | (0.0741) | (0.401) | (0.359) |
| Trade/GDP $_{i\,t-1}$ | -1.001*** | -3.162* | -0.974 | -0.998*** | -3.173* | -1.227 |
| | (0.217) | (2.000) | (1.484) | (0.222) | (2.044) | (1.579) |
| Polity2 $_{i\,t-1}$ | -0.107** | -0.415 | 1.049** | -0.108** | -0.413 | 1.241** |
| | (0.0510) | (0.349) | (0.593) | (0.0530) | (0.363) | (0.700) |
| Polity2 $_{j\,t-1}$ | 0.0225 | -0.888*** | -0.548*** | 0.0217 | -0.887*** | -0.526*** |
| | (0.0491) | (0.190) | (0.142) | (0.0498) | (0.190) | (0.162) |
| RTA Dispute $_{ij\,s\,t-1}$ | 1.058*** | 1.652** | 3.358*** | 1.059*** | 1.648** | 3.357*** |
| | (0.230) | (0.842) | (1.180) | (0.231) | (0.837) | (1.171) |
| WTO Dispute $_{ij\,s\,t-1}$ | 1.327** | 2.546* | 4.866*** | 1.314** | 2.556* | 4.841*** |
| | (0.772) | (1.602) | (1.704) | (0.781) | (1.599) | (1.641) |
| Both Forum Disputes $_{ij\,s\,t-1}$ | 3.304*** | 3.817*** | 5.256*** | 3.296*** | 3.820*** | 5.252*** |
| | (0.755) | (0.764) | (1.846) | (0.739) | (0.743) | (1.819) |
| t | -0.232*** | 7.056*** | -4.608** | -0.231*** | 5.708*** | -4.546** |
| | (0.0916) | (1.018) | (2.202) | (0.0911) | (0.966) | (2.197) |
| $t^2$ | 0.0238** | -8.420*** | 2.191** | 0.0238** | -7.018*** | 2.177** |
| | (0.0105) | (0.476) | (1.022) | (0.0105) | (0.426) | (1.010) |
| $t^3$ | -0.000577** | 0.314*** | -0.238** | -0.000578** | 0.262*** | -0.237** |
| | (0.000301) | (0.0171) | (0.116) | (0.000301) | (0.0153) | (0.114) |
| Andean Community | 0.0646 | -19.36*** | -34.48*** | 0.0617 | -16.14*** | -40.00*** |
| | (0.420) | (1.679) | (2.859) | (0.415) | (1.573) | (4.526) |
| Mercosur | 1.082*** | 1.096** | -2.999** | 1.085*** | 1.091** | -3.356** |
| | (0.329) | (0.583) | (1.379) | (0.338) | (0.601) | (1.562) |
| Central American Common Market | -0.861* | -11.71*** | -23.10*** | -0.856* | -8.412** | -20.73*** |
| | (0.586) | (4.213) | (2.160) | (0.597) | (4.475) | (2.387) |
| Constant | 3.932** | -21.03** | 45.64*** | 3.851* | -21.08** | 48.38*** |
| | (2.360) | (10.40) | (13.48) | (2.523) | (11.20) | (13.98) |
| Observations | 3,661 | 3,661 | 3,661 | 3,661 | 3,661 | 3,661 |
| Pseudo R-squared | 0.350 | 0.350 | 0.350 | 0.351 | 0.351 | 0.351 |

Robust standard errors in parentheses. Adjusted for 58 clusters in dyad. Significance levels based on one-tailed hypothesis test.
*** p< 0.01, ** p< 0.05, * p < 0.10

Using this measure of previous regional dispute experience, which captures the ruling phase of the process, I re-estimate my models from the previous chapter.[6] I include a number of control variables to account for alternative explanations that can influence future forum choice; specifically, alternate sources of learning, precedent setting considerations, economic characteristics and relationships, political dynamics, retaliatory incentives, and institutional design.[7] Table 5.2 presents the first set of empirical tests on the effect of the decisions issued in disputes against the potential complainant in the previous year in a particular subject area on forum choice. This table presents the unconditional effect of this measure of RTA decisions in model 1 and then proceeds to assess the effect of the number of decisions when conditional on the ability component of learning capacity, i.e., the level of development, in model 2. In table 5.3 I expand my analyses to examine the effect of previous decisions issued in disputes when conditioned by measures that capture the incentive component of learning capacity.

Across the models in tables 5.2 and 5.3, the effect of the number of decisions varies based on model specification. In models 1, 3, and 5, the coefficient associated with the number of RTA decisions exhibits a positive and statistically significant relationship with the likelihood of initiating a regional dispute, relative to the likelihood of initiating no dispute. An increase in the number of regional decisions thus is associated with an increase in the likelihood of future regional dispute initiation. The number of previous regional decision also exhibits a statistically significantly effect on the other dispute resolution outcomes. In model 4, an increase in the number of decisions issued is associated with a decrease in the likelihood that only a WTO dispute is initiated while it is positively associated with that likelihood in model 5. In models 1, 2, and 5, an increase in the number of RTA decisions is positively associated with the likelihood of initiating disputes at both the RTA and the WTO, relative to the likelihood of not initiating a dispute.

[6] The reference group in the models presented in this chapter is "no dispute initiated." This is done because of problems estimating the models using the decision count variables when "WTO dispute" is used as the reference group.
[7] These alternative explanations are discussed in more detail in sections 5.4 and 5.5 of this chapter.

**Table 5.3: Effect of Previous RTA Decisions in the Same Subject Area, Conditioned by Incentive Component of Learning Capacity**

| | Model 3 | | | Model 4 | | | Model 5 | | |
|---|---|---|---|---|---|---|---|---|---|
| | RTA | WTO | RTA & WTO | RTA | WTO | RTA & WTO | RTA | WTO | RTA & WTO |
| # RTA Decisions $_{i\ s\ t-1}$ X Sector Exports $_{ij\ s\ t-1}$ / Total Exports $_{ii\ t-1}$ | -0.0486** | -0.348 | -0.257 | | | | | | |
| | (0.0244) | (0.345) | (0.223) | | | | | | |
| # RTA Decisions $_{i\ s\ t-1}$ X Sector Exports $_{ij\ s\ t-1}$ / GDP $_{i\ t-1}$ | | | | -0.036*** | -0.285* | -0.202 | | | |
| | | | | (0.0128) | (0.179) | (0.172) | | | |
| # RTA Decisions $_{i\ s\ t-1}$ X Power $_{ii\ t-1}$ | | | | | | | 0.058** | 0.127 | 0.153 |
| | | | | | | | (0.032) | (0.227) | (0.220) |
| # RTA Decisions $_{i\ s\ t-1}$ | 0.184*** | -0.678 | 0.394 | -0.247 | -3.413* | -1.616 | 0.319*** | 0.298** | 1.033*** |
| | (0.0710) | (0.581) | (0.422) | (0.194) | (2.466) | (2.005) | (0.062) | (0.139) | (0.353) |
| # WTO Decisions $_{i\ s\ t-1}$ | 0.0223 | -14.72*** | -26.29*** | 0.0935 | -17.97*** | -27.5*** | -0.092 | -17.09*** | -30.52*** |
| | (0.256) | (2.348) | (3.921) | (0.251) | (2.719) | (5.810) | (0.290) | (3.892) | (5.916) |
| # RTA Disputes $_{i\ s\ t-1}$ | 0.0712* | -0.0687 | 0.0752 | 0.0714* | -0.0784 | 0.0864 | 0.079* | -0.082 | 0.086 |
| | (0.0536) | (0.166) | (0.0738) | (0.0540) | (0.189) | (0.0712) | (0.059) | (0.192) | (0.075) |
| # WTO Disputes $_{i\ s\ t-1}$ | -0.00930 | 1.360** | 2.020** | 0.0377 | 1.414** | 2.239** | -0.059 | 1.413** | 2.092** |
| | (0.201) | (0.811) | (0.975) | (0.195) | (0.807) | (1.218) | (0.218) | (0.806) | (1.083) |
| # Third Party $_{i\ t-1}$ | -0.083*** | 0.0534 | -0.0740 | -0.085*** | 0.0668 | -0.0390 | -0.09*** | 0.070 | -0.041 |
| | (0.0322) | (0.0955) | (0.125) | (0.0315) | (0.0899) | (0.100) | (0.032) | (0.096) | (0.093) |
| Power $_{ij\ t-1}$ | -0.0607 | -0.704 | 1.629*** | -0.0165 | -0.663 | 1.655*** | -0.066 | -0.702 | 1.562*** |
| | (0.0951) | (1.110) | (0.503) | (0.0941) | (1.016) | (0.534) | (0.094) | (1.082) | (0.492) |
| GDPpc $_{i\ t-1}$ | -0.232* | 1.710* | -2.061** | -0.253** | 1.643* | -2.048** | -0.232* | 1.642* | -2.041** |
| | (0.157) | (1.072) | (1.086) | (0.147) | (1.018) | (1.075) | (0.154) | (1.083) | (1.047) |
| GDPpc $_{j\ t-1}$ | 0.360*** | 2.679*** | -0.477** | 0.384*** | 2.754*** | -0.479* | 0.403*** | 2.656*** | -0.506* |
| | (0.124) | (0.598) | (0.282) | (0.119) | (0.600) | (0.324) | (0.131) | (0.600) | (0.346) |
| Sector Exports $_{ij\ s\ t-1}$ / Total Exports $_{ij\ t-1}$ | 0.285*** | -0.718* | -1.593*** | 0.202** | -0.810** | -1.90*** | 0.224** | -0.802** | -1.906*** |
| | (0.121) | (0.439) | (0.439) | (0.101) | (0.403) | (0.541) | (0.103) | (0.413) | (0.587) |
| Sector Exports $_{ij\ s\ t-1}$ / GDP $_{i\ t-1}$ | 0.243*** | 0.416 | 2.360*** | 0.320*** | 0.497 | 2.645*** | 0.258*** | 0.443 | 2.475*** |
| | (0.0766) | (0.403) | (0.389) | (0.0799) | (0.394) | (0.553) | (0.074) | (0.406) | (0.461) |
| Trade/GDP $_{i\ t-1}$ | -1.076*** | -3.146* | -0.859 | -1.100*** | -3.049** | -0.894 | -1.06*** | -3.074* | -0.927 |
| | (0.219) | (2.065) | (1.427) | (0.213) | (1.817) | (1.436) | (0.221) | (1.957) | (1.486) |
| Polity2 $_{i\ t-1}$ | -0.100** | -0.433 | 1.029** | -0.0996** | -0.424 | 0.994** | -0.101** | -0.409 | 1.006** |
| | (0.0511) | (0.372) | (0.572) | (0.0491) | (0.351) | (0.563) | (0.051) | (0.356) | (0.578) |
| Polity2 $_{j\ t-1}$ | 0.0259 | -0.910*** | -0.606*** | 0.0145 | -0.896*** | -0.633*** | 0.018 | -0.888*** | -0.579*** |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | (0.0478) | (0.189) | (0.188) | (0.0460) | (0.192) | (0.213) | (0.047) | (0.188) | (0.172) |
| RTA Dispute $_{ij\ s\ t-1}$ | 1.052*** | 1.668** | 3.378*** | 1.054*** | 1.591** | 3.475*** | 1.042*** | 1.630** | 3.384*** |
| | (0.229) | (0.877) | (1.200) | (0.229) | (0.895) | (1.295) | (0.234) | (0.831) | (1.247) |
| WTO Dispute $_{ij\ s\ t-1}$ | 1.353** | 2.454* | 4.831*** | 1.313* | 2.430* | 4.943** | 1.326** | 2.517* | 4.893*** |
| | (0.768) | (1.713) | (2.017) | (0.813) | (1.620) | (2.151) | (0.764) | (1.575) | (1.865) |
| Both Forum Disputes $_{ij\ s\ t-1}$ | 3.275*** | 3.839*** | 5.289*** | 3.291*** | 3.710*** | 5.346*** | 3.334*** | 3.770*** | 5.277*** |
| | (0.757) | (0.664) | (1.802) | (0.750) | (0.703) | (1.889) | (0.773) | (0.754) | (1.889) |
| t | -0.235*** | 5.355*** | -4.759** | -0.236*** | 5.821*** | -5.183** | -0.227*** | 5.603*** | -4.831** |
| | (0.0898) | (1.289) | (2.346) | (0.0898) | (1.143) | (2.854) | (0.090) | (0.984) | (2.575) |
| $t^2$ | 0.0239** | -6.611*** | 2.210** | 0.0242*** | -7.168*** | 2.436** | 0.023** | -6.928*** | 2.294** |
| | (0.0103) | (0.624) | (1.053) | (0.0103) | (0.651) | (1.265) | (0.010) | (0.468) | (1.168) |
| $t^3$ | -0.0006** | 0.247*** | -0.238** | -0.0006** | 0.267*** | -0.263** | -0.001** | 0.258*** | -0.249** |
| | (0.0003) | (0.0222) | (0.118) | (0.000295) | (0.0236) | (0.139) | (0.0003) | (0.017) | (0.130) |
| Andean Community | 0.0468 | -18.05** | -29.19*** | 0.155 | -23.33*** | -30.9*** | 0.116 | -16.53*** | -31.18*** |
| | (0.424) | (8.014) | (3.118) | (0.429) | (5.676) | (6.069) | (0.427) | (1.609) | (2.477) |
| Mercosur | 1.030*** | 1.065** | -3.195** | 1.139*** | 1.340** | -2.875** | 1.107*** | 1.154** | -2.862** |
| | (0.344) | (0.552) | (1.572) | (0.338) | (0.589) | (1.338) | (0.338) | (0.593) | (1.307) |
| Central American Common Market | -0.906* | -8.345** | -19.81*** | -0.866* | -8.275** | -19.7*** | -0.810* | -8.276** | -20.52*** |
| | (0.579) | (4.345) | (2.420) | (0.571) | (4.063) | (2.302) | (0.582) | (4.149) | (2.165) |
| Constant | 4.691** | -21.04** | 46.41*** | 5.699*** | -20.93** | 49.49*** | 4.331** | -20.784** | 47.128*** |
| | (2.369) | (10.20) | (13.67) | (2.380) | (10.48) | (14.64) | (2.357) | (10.692) | (13.676) |
| Observations | 3,661 | 3,661 | 3,661 | 3,661 | 3,661 | 3,661 | 3661 | 3661 | 3661 |
| Pseudo R-squared | 0.353 | 0.353 | 0.353 | 0.354 | 0.354 | 0.354 | 0.352 | 0.352 | 0.352 |

Robust standard errors in parentheses. Adjusted for 58 clusters in dyad. Significance levels based on one-tailed hypothesis test. *** p< 0.01, ** p< 0.05, * p < 0.10

When accounting for the conditioning effect of learning capacity, the significance and direction of the interaction terms' coefficients vary based on the measure used to capture a state's learning capacity. When the level of development is used to capture learning capacity, the interaction term is only statistically significant when predicting the likelihood that disputes are initiated at both the RTA and WTO dispute resolution forums; an increase in the interaction term is associated with a decrease in the likelihood that this dispute resolution alternative is observed. When learning capacity is measured as the importance of exports in a subject area in models 3 and 4, the interaction terms exhibit a negative and statistically significant relationship with the likelihood of initiating a regional dispute. In model 4 and 5 I

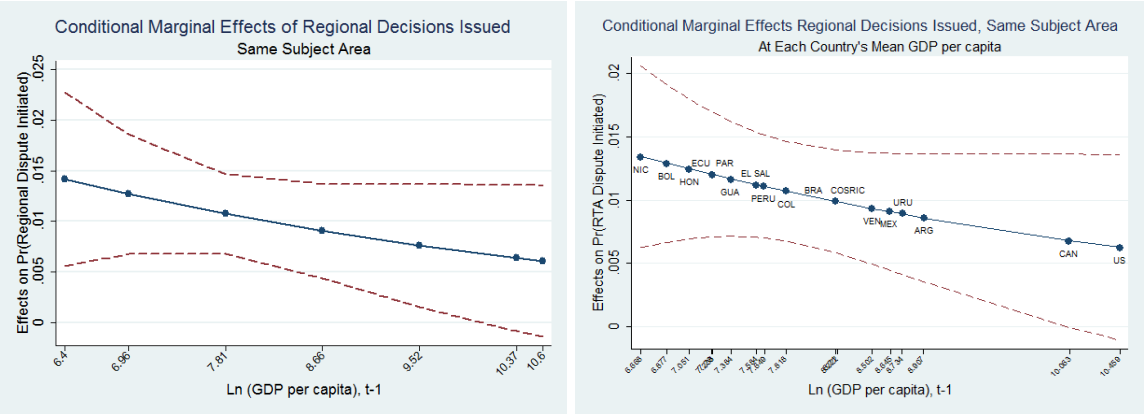
also observe that an increase in these interaction terms is associated with a decrease and an increase, respectively, in the likelihood that a WTO dispute is initiated.

To fully understand the stumbling block effect of the decisions issued by regional dispute settlement bodies, I examine the conditional marginal effects associated with an increase in the number of decisions issued in disputes against the potential complainant for models 2 through 5, which are presented in figures 5.1 through 5.4.[8] Across all models, I find that when all variables are held at their means, an increase in the number of decisions issued in previous disputes positively predicts the likelihood of regional dispute initiation, relative to the likelihood of initiating no dispute, which supports hypothesis 1. When all variables are at their means, an increase in the number of decisions issued in disputes against the potential complainant are associated with a 1.03%, 1.03%, 1.16%, 0.998%, and 0.95% increase on the likelihood of initiating a regional trade dispute in the following year, relative to the likelihood of initiating no dispute, for models 1 through 5, respectively.

When considering the conditional effect of previous decisions issued in disputes as the level of learning capacity varies, I find further support for my expectations. My first measure of learning capacity – level of development – captures the ability of a state to learn. Recall that states with a higher level of development are expected to be able to establish more sophisticated dispute resolution infrastructures, which allows this type of state to generate more accurate expectations on the costs and outcomes associated with each dispute resolution alternative. As a result, the divergence between expectations and outcomes, which is where learning occurs, is likely much greater for states without this sophisticated infrastructure, i.e., states with a lower level of development. The level of development is thus inversely related with learning capacity; states at the lower levels of development have a greater potential to learn from previous experience.

[8] All conditional marginal effects are calculated holding all other variables at their means.

**Figure 5.1: Conditional Marginal Effects of Number of Decisions Issued Against a Potential Respondent in the Same Subject Area, Conditional on Level of Development**




The conditional marginal effects are captured in the first panel of figure 5.1, which look at the effect of decisions issued when conditioned by level of development, confirm my expectations. I find that an increase in the number of decisions positively affects the likelihood of regional dispute initiation and that this effect is conditioned by learning capacity. As the level of development increases – i.e., learning capacity decreases – the effect of the number of decisions decreases. At the lowest level of development, an increase in the number of decisions in the previous year is associated with a 1.41% increase in the likelihood of initiating a regional dispute relative to initiating no dispute. These conditional marginal effects decrease to 1.07% and 0.61% at the mean and maximum of the potential complainant's development level. To provide context to these marginal effects, it is important to understand what states are considered to be developed or developing and where they would fall along the marginal effects graph. This is represented in the second panel in figure 5.1. In this figure, I have calculated and plotted the marginal effects, derived from the model presented above, at each country's mean level of development.[9] Again, the marginal effects are statistically significant and positive at each country's mean level of development. Further, these effects decrease as the country's mean level of development increases, which is consistent with my expectations.

[9] The key difference between these two figures is in the values used to calculate the marginal effects and generate the graph and confidence intervals. In the first panel, I utilize the overall summary statistics of the level of development variable. In the second, I utilize the mean of the level of development for each country in the sample to calculate the marginal effects.

I also find relationships consistent with my expectations when learning capacity is operationalized as the potential complainant's dependence on its exports to another member state, which are captured as the ratio of sector exports to total exports and the ratio of sector exports to GDP. These measures are positively related to learning capacity and reflect a state's incentive to learn from previous experience. As exports to another member state in a particular subject area become more vital to a potential complainant's total trade and overall economic health, it may view disputes with that state as more important and/or more likely to occur. A state will have a greater incentive to learn from experience in order to minimize the potential resource and audience costs associated with disruptions from trade and/or trade disputes in a particular subject area with the other member state.

**Figure 5.2: Conditional Marginal Effects of Number of Decisions Issued Against a Potential Respondent in the Same Subject Area, Conditional on Ratio of Sector Exports to Total Exports**

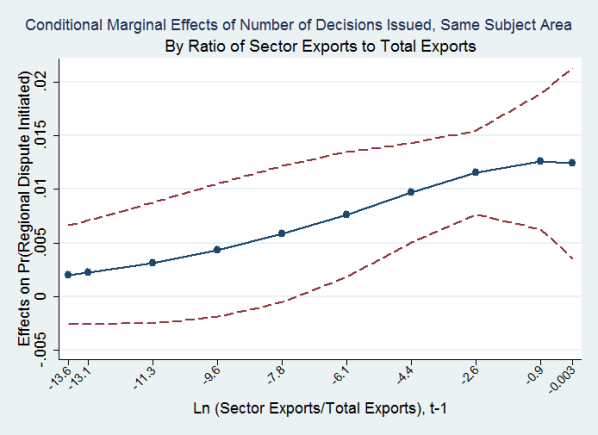
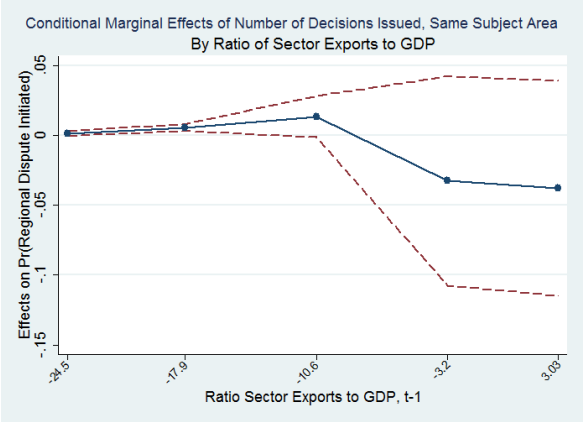
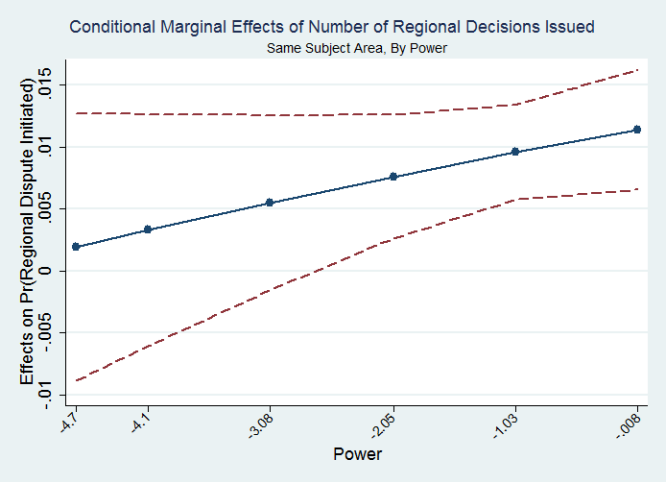



**Figure 5.3: Conditional Marginal Effects of Number of Decisions Issued Against a Potential Respondent in the Same Subject Area, Conditional on Ratio of Sector Exports to GDP**



When conditional on these two measures of export dependence, which are reported in figures 5.2 and 5.3, respectively, I find that the number of decisions issued is again associated with an increase in the likelihood of a regional dispute being initiated and that the magnitude of the effect is conditional on learning capacity. As the potential complainant's exports in a particular subject area become a greater share of its total exports to another member state in the regional organization, the effect of the number of decisions issued in the previous year in that subject area increases. At four standard deviations below the mean, the mean, and maximum levels of the ratio of sector exports to total exports an increase in the number of decisions issued is associated with a 0.43%, 1.16%, and 1.25% increase in the likelihood of initiating a regional dispute relative to the likelihood of not initiating a regional or multilateral dispute, respectively. The same trends are exhibited in figure 5.3, where learning capacity is measured as the ratio of sector exports to GDP. At the minimum, one standard deviation below the mean, and mean levels of sector exports to GDP, an increase in the number of decisions issued in the previous year is associated with a 0.123%, 0.54%, and 1.3% increase in the likelihood of initiating a regional dispute in the current year, respectively.

**Figure 5.4: Conditional Marginal Effects of Number of Decisions Issued Against a Potential Respondent in the Same Subject Area, Conditional on *Power***




The final measure I use to capture learning capacity is the measure of the potential complainant's economic power disparity in the dyad, which is reported in figure 5.4. This operationalization of learning capacity also captures a state's incentives to learn from previous experience. I expect that, when

conditioning the effect of the number of decisions issued in a dispute, *Power* is positively related to learning capacity. Since I am measuring decisions issued in disputes *against* a potential complainant, it is possible that this potential complainant is simultaneously assessing costs associated with compliance with a ruling and learning from its experiences, both of which will influence the likelihood of initiating a dispute against another member state of the institution in the following year. Given the absence of formal enforcement mechanisms at these regional dispute settlement mechanisms, as a state's economic power in the dyad increases, costs and concerns associated with non-compliance are mitigated, which will increase the ability to learn from previous decisions and apply these lessons when initiating a regional dispute in the future. A more powerful potential complainant holds more sway over its partners; it would thus face lower costs for non-compliance. However, when there is parity or disparity that does not favor the potential complainant, the costs associated with potential compliance increase. As those costs increase, the resources available to learn from prior experience and initiate additional future disputes will decrease. A state that has greater economic power in the dyad thus has a greater learning capacity since its ability to learn is not hindered by compliance costs and considerations.

The conditional marginal effects reported in figure 5.4 provide additional support for my expectation that the effect of previous experience is positive and conditional on learning capacity. I find that the positive effect of the number of decisions issued on the likelihood of future regional dispute initiation increases as the potential complainant's economic power increases relative to its potential partner in the dispute. At two standard deviations below the mean, the mean, and maximum of *Power* an increase in the number of decisions issued in a dispute against a potential complainant in a particular subject area in the previous year is associated with 0.55%, 0.96%, and 1.14% increase in the likelihood that a regional dispute is initiated, respectively. Given the informal type of the enforcement mechanism associated with these regional bodies, these results indicate that compliance considerations can influence the effect of learning from previous experience.

### 5.1.1 Alternative Specifications of Previous Decisions Issued

To assess the robustness of my results, I re-estimate these models using measures that account for the number of decisions issued in the previous five years and across all subject areas. Based on space considerations, the tables and figures associated with these models are found in appendices A.2 and B.2. These two alternative measures are generated using the data on the number of decisions issued. The first is a sum of all decisions issued in disputes against a potential complainant in a particular subject area in the past five years. This measure captures the cumulative effect of these decisions; it does not limit learning to the short-term and instead considers that states may learn from these decisions over the long-term. The second alternative measure is a count of all decisions issued in disputes initiated against a potential complainant, state *i*, in the previous year in all subject areas. This measure captures the effect of learning across decisions addressing a diverse set of issues.

When re-estimating my models with these alternative measures of previous experience – i.e., the total number of decisions issued in the same subject area in the past five years and the number of decisions issued across subject areas in the previous year – there are a number of similarities with the results reported in tables 5.2 and 5.3 and with the marginal effects presented in figures 5.1 through 5.4. Focusing on the conditional marginal effects associated with each of these alternative measures of the number of decisions issued, I find support for my expectation that the number of decisions issued positively influences the likelihood of future regional dispute initiation but that this effect is conditional on learning capacity. Across these models, when all variables are at their means the conditional marginal effects associated with each of these measures are positive; an increase in the number of decisions issued increases the likelihood that a regional dispute is initiated, relative to the likelihood of initiating no dispute. Comparing the conditional marginal effects associated with the number of decisions issued in the previous five years and the count of decisions issued across subject areas to the marginal effects

associated with the number of decision for models 1 through 5, I find that these effects are attenuated when using the alternative measures of previous decisions issued.[10]

Further similarities are observed when examining the changes in the marginal effects as learning capacity varies. Across many specifications, the conditional marginal effects again exhibit a positive and statistically significant sign when the measure of previous experience is conditioned by learning capacity. My first alternative measure – which captures the cumulative learning effect of previous decisions issued – provides robust support to the findings presented above. For each of the measures of learning capacity, I find that the conditional marginal effects are positively associated with the likelihood of regional dispute initiation and that the effect increases as learning capacity increases. Specifically, I find that an increase in the level of development is associated with a decrease in the observed marginal effects of cumulative number of previous decisions issued, which is consistent with my expectation that learning capacity is inversely related to the level of development.[11] Further, I find that an increase in dependence on dyadic exports in a particular subject area and the share of the potential complainant's economic power in the dyad – all of which are expected to be positively related to learning capacity – demonstrate increasing marginal effects for the number decisions issued in the past five years on the likelihood of regional dispute initiation in the future.[12]

I find mixed support, however, for my expectations when the number of decision issued across subject areas is used to capture previous regional experience. Using the three measures I posit to be positively associated with learning capacity – the ratio of sector exports to total exports, the ratio of sector

[10] Specifically, for each of the re-estimated models, respectively, the conditional marginal effects show that, relative to initiating no dispute: an increase in the number of decisions issued in disputes against a potential complainant in the same subject area in the past five years are associated with a 0.25%, 0.24%, 0.26%, 0.23%, and 0.24% increase in the likelihood that a regional dispute is initiated; an increase in the number decisions issued in disputes against a potential complainant across subject areas are associated with a 0.19%, 0.22%, 0.18%, 0.19%, and 0.17% increase in the likelihood of initiating a regional dispute.

[11] At the minimum, mean, and two standard deviations above the mean of the level of development, an increase in the number of decisions issued in the previous five years is associated with a 0.4%, 0.26%, and 0.1% increase in the likelihood that a regional dispute is initiated in the future.

[12] At four standard deviations below the mean, one standard deviation below the mean, mean, and maximum of the ratio of sector exports to total exports the number of decisions issued in the previous five years is associated with a 0.08%, 0.2%, 0.3%, and 0.3% increase in the likelihood that a regional dispute is initiated. At the minimum, one standard deviation below the mean, and mean of the ratio of sector exports to GDP, an increase in the cumulative measure of previous decisions issued is associated with a 0.04%, 0.14%, and 0.31% increase in the likelihood that a regional dispute is initiated. Finally, at the minimum, one standard deviation below the mean, and maximum of *Power*, an increase in this cumulative measure is associated with a 0.21%, 0.23%, and 0.24% increase in the likelihood that a regional dispute is initiated.

exports to GDP, and *Power* – I find results that support my hypotheses. For each of these measures, the conditional marginal effects associated with the number of decision issued across subject areas is positively associated with the likelihood of a regional dispute being initiated in the following year and these effects increase as each measure of learning capacity increases.[13] Using these measures of learning capacity and previous experience, there is one instance where the results directly contradict my expectations. Unlike the results in figure 5.4, at the minimum of *Power* an increase in the number of decisions issued in a dispute initiated against a potential complainant is associated with a 0.21% decrease in the likelihood that the potential complainant initiates a regional dispute against a particular member state of the regional organization, relative to the likelihood of initiating no dispute. I believe this relationship is observed because of considerations and costs associated with compliance with these decisions that can influence the opportunity costs of dispute initiation and, as a result, a state's decision to initiate a regional dispute.

Another key difference observed in the conditional marginal effects associated with the count across subject areas is apparent when learning capacity is measured as the level of development. Contrary to my expectations, an increase in the number of decisions issued across subject areas is associated with an increase in the likelihood of regional dispute initiation as learning capacity increases.[14] I expect that this relationship is exhibited because of difficulties associated with analyzing the available information in the decisions issued in broader disputes or disputes in different subject areas and applying what is learned to the dispute resolution infrastructure. As a result, states with a greater amount of initial resources will be better able to use those resources to interpret and internalize the information in the decisions to the dispute resolution infrastructure. States with fewer initial resources will face resource

[13] At two standard deviations below the mean, the mean, and maximum of the ratio of sector exports to total exports, an increase in the number of decisions issued across subject areas is associated with a 0.069%, 0.18%, and 0.35% increase in the likelihood that a regional dispute is initiated, respectively. At the minimum and one standard deviation below the mean of this measure of sector exports to GDP, an increase in previous experience, as measured by the number of decisions issued in disputes against the potential complainant across subject areas, is associated with a 0.044% and 0.129% increase in the likelihood of initiating a regional dispute, respectively. At the mean and maximum levels of *Power*, an increase in the number of decisions issued is, respectively, associated with a 0.18% and 0.29% increase in the likelihood of initiating a regional dispute, relative to no dispute being initiated.

[14] At one standard deviation below the mean, the mean, two standard deviations above the mean, and maximum levels for GDP per capita, an increase in the number of decisions issued is associated with a 0.15%, 0.21%, 0.28%, and 0.295% increase in the likelihood of initiating a regional dispute, respectively, relative to the likelihood of initiating no dispute.

constraints that limit the potential learning space and their ability to quickly learn from decisions that cover a wider array of subject areas.

## 5.2 Marginal Returns on Additional Previous Experience on Regional Dispute Initiation

While states have the potential to learn from previous regional experience, I also argued that there are diminishing returns associated with additional previous dispute experience. Increasing amounts of previous experience are associated with an increase in the amount of resources needed to deal with existing regional endeavors. As a result, this influences the ability of a state to learn from these experiences as well as the likelihood that an additional regional dispute is initiated in the future. I expect that a threshold is reached where the resource constraints exceed the benefits derived from previous experience. In this section I examine this final hypothesis with the decision measure of previous regional dispute experience.

**Figure 5.5: Conditional Marginal Effects As Number of Decisions Issued Increases, Same Subject Area**

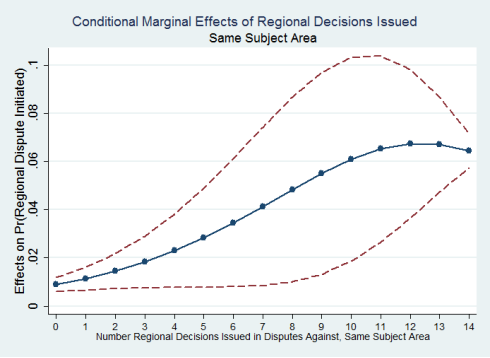
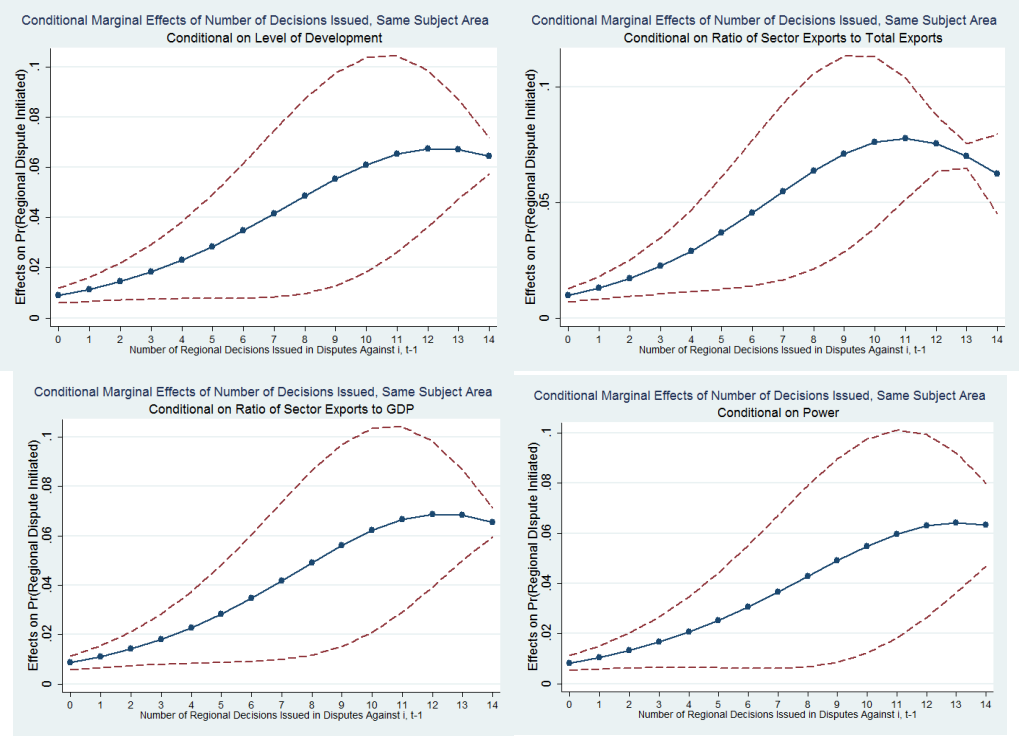


**Figure 5.6: Conditional Marginal Effects As Number of Decisions Issued Increases, Decisions Conditional on Learning Capacity (Same Subject Area)**




To assess the returns on additional experiences, I examine the conditional marginal effects associated with increasing amounts of previous decisions issued in disputes against a potential complainant. In figure 5.5 I present the conditional marginal effects of the number of decisions issued associated with model 1 while figure 5.6 presents the conditional marginal effects associated with models 2 through 5. Across these figures, I find that the conditional marginal effects of the number of decisions issued are statistically significant and positive. Additionally, these results demonstrate the non-linear relationship I predicted, which is discussed in detail in chapter two.[15] The conditional marginal effects increase as the number of decisions issued increases across most amounts of previous experience. At the highest number of decisions issued, the size of the conditional marginal effects begins to decrease.

[15] The peak of the curve is: around twelve disputes when the number of decisions is not conditioned by learning capacity; around twelve disputes when conditional on the level of development; around eleven disputes when conditional on the ratio of sector exports to total exports; around twelve disputes when conditional on the ratio of sector exports to GDP; and finally, around thirteen disputes when conditional on *Power*.

Using the alternate specifications of previous decisions issued provides somewhat different results for the returns of additional decisions on the likelihood of initiating a regional dispute in the following year. The figures associated with these conditional marginal effects associated with the number of decisions issued in the past five years as well as the number of decisions issued in the previous year across subject areas are presented in appendix B.2. Unlike the conditional marginal effects in figures 5.5 and 5.6, the conditional marginal effects associated with the alternative measures of the decisions issued do not exhibit the expected non-linear relationship. Across all of these models, the magnitude of the conditional marginal effects increases as the number of decisions issued increases. For the measure across subject areas, these marginal effects do lose statistical significance at the highest amounts of previous decisions issued.[16]

Overall, I receive some support for the hypothesis put forward in chapter two that there are diminishing returns for additional previous experience. The results associated with the subject-specific measure of previous decisions issued demonstrate the predicted non-linear result. This demonstrates that there are resource limitations faced by potential complainant states that limit the learning that occurs and/or the effect of learning on forum choice. I expect that these subject-specific measures represent the case where the greatest limitations are created; this is due to the characteristics of this phase of the dispute resolution process. A decision issued by the formal body of the regional dispute settlement mechanism presents a potential need for compliance with that decision. While the organization itself may be unable to force compliance, there are mechanisms available to put pressure on a state to change its policy or practice to comply with the specific recommendations or ruling in the decision. The costs and pressures associated with compliance are likely to have the greatest influence on limiting the effect of learning on future forum choice within the same subject area. For example, a potential complainant that has had ten decisions issued in disputes against it in agriculture may need to reallocate resources earmarked for future

[16] When conditional on learning capacity: the conditional marginal effects are statistically insignificant above thirty-four decisions issued when learning capacity is measured as level of development; the conditional marginal effects are statistically insignificant above thirty-one decisions issued when learning capacity is measured as the ratio of sector exports to total exports; the conditional marginal effects are statistically insignificant above thirty decisions issued when learning capacity is measured as the ratio of sector exports to GDP; the conditional marginal effects are statistically insignificant above twenty-six decisions issued when learning capacity is measured as *Power*.

agricultural dispute resolution to efforts to rework policies or practices that are inconsistent with the regional trade agreements laws and obligations.

However, the resource pressures exerted on a state are likely less intense as the number of decisions over time and/or across subject areas increases; this allows states to learn from a greater number of decisions issued. This would yield effects on the likelihood of regional dispute initiation that increase as each of these measures of the number of decision issued increases. The potential costs and pressures are more likely diffused across time or diverse industries and sectors, respectively, when examining cumulative and general learning. While costs may arise regarding compliance with a decision issued in, for example, a prior agricultural dispute, these costs are less likely to have a deleterious effect on the ability of industries in the primary commodities sector to assist the government and provide resources for litigation in a dispute that arises from a practice or policy associated with products in this area. When considering cumulative and general learning from decisions issued in previous disputes, I thus expect that the trade-off between compliance and learning is less apparent, which allows states to learn from additional experiences as the number of decisions over time and across subject areas increases. This is reflected in the conditional marginal effects; in each of figures associated with these measures the marginal effects increase across all amounts of decisions issued. Since costs are diffused across time and space, states are able to learn about the dispute resolution process through a greater number of decisions issued, which augments the stumbling block effect of regional dispute settlement bodies.

## 5.3 Differential Effects of Dissimilar Types of Decisions

The previous section focuses on the role of the decisions issued in a previous dispute against a potential complainant on the likelihood of initiating a dispute in the future. In that analysis, I treated the decisions issued by the dispute settlement bodies as homogenous. I relax that simplifying assumption in this section. I take into account the heterogeneity of the decisions issued in the trade disputes at regional forums to assess the effect of different types of decisions on future regional dispute initiation. I expect that the dissimilarities in the findings inherent in these decisions yield divergent learning patterns. The

variation in these patterns is a function of the specific types of information provided for each type of ruling. As a result, different types of rulings will have differential effects on the likelihood of initiating a regional dispute. In accounting for the influence of the nuances in the decisions on the likelihood of initiating a regional dispute, I am able to better fill the gap in understanding of how states learn from previous experience at regional dispute settlement bodies and utilize what it has learned in future decision making processes.

The variations in the decisions issued by these dispute settlement bodies are expected to influence forum choice and thus the stumbling block role played by regional dispute settlement bodies via the dissimilar information provided across different types of rulings. Given that there is variation in the information provided by each type of decision, the ruling that is issued influences the manner in which a state updates its expectations and beliefs regarding dispute resolution at each relevant forum. This section examines whether the same positive relationship is exhibited when analyzing the effect of the total number of decisions and total number of disputes on the likelihood of regional trade dispute initiation exists when accounting for the heterogeneity of the decisions issued. Again, the learning capacities of states are important conditioning factors; the different effect of each type of the decision comes from the amount and type of information a state can acquire, which is based on a state's learning capacity.

Given that the differences across rulings may matter, what are the key defining lines that characterize the types of decisions? I conceptualize three different types of decisions: affirm, mixed, and remand. Across all three types of decisions there is some consistency in the information that is provided. All three reveal the procedures of dispute settlement and the preferences of the trade partner involved in the dispute. However, the differences in the rulings provide divergent insight into the application of the state's organizational obligations, among other things. As a result, each type of ruling may change particular elements of a state's beliefs – or its confidence in those beliefs – but not the same elements across different types.

The first type is the "affirm" decision, which supports the respondent's position in the dispute. In doing so, the dispute settlement body rules that the contentious trade policy is not inconsistent with the

relevant laws of the trade institution. Such a decision provides information to a state that confirms the legality of the policy that the respondent has enacted. Policy continuity results from this type of learning.[17] The current potential complainant, looking to its previous experience as a respondent, would be able to use these types of decisions to ascertain the legality of the policy it is currently examining and deciding where to litigate. This would enable a state to assess the strength of its case against a potential respondent. As a result, "affirm" decisions should be positively associated with the likelihood of selecting a regional dispute settlement body given that a multilateral alternative exists at the WTO. Again, learning capacity is important for understanding the effect of these types of decisions. The divergence between expectations and outcomes is greater for states with a greater learning capacity; the conditional marginal effects will thus increase as learning capacity increases. I expect this relationship to be observed in these conditional marginal effects associated with the number of "affirm" decisions because this type of decision captures both simple learning – i.e., repeated behavior that results from policy continuity – as well as complex learning[18] – i.e., that state assesses and applies the specific information provided via these types of rulings.

The second type of decision, "remand" decisions, provide the opposite type of information to the state. A "remand" decision means that the dispute settlement body supports the complainant's position. The implication of this is that the body rules that the policy at the heart of the dispute, which is implemented by the respondent in that dispute, is inconsistent with the relevant laws of the trade institution. While "affirm" type of decisions informs on the actions consistent with the obligations as a member state of the regional body, "remand" decision provides insight about what violates these commitments. Similarly, a state can apply this information to its infrastructure to increase the accuracy of identifying not only the policies that should be litigated but the manner in which the litigation should focus its efforts. However, the learning that results from these types of decisions may not always yield a positive increase in the likelihood of initiating a dispute at a regional body in the future.

[17] Levy (1994, 304); Meseguer (2005); Wiegand and Powell (2011).
[18] Knopf (2003, 189)

I expect that learning capacity is important for predicting the effect of remand type of decisions issued. When a state is proven to be wrong in its expectations, certain states may face greater opportunity costs for initiating a dispute at a particular forum in the future; they seek to learn more before using that forum again. As a result, I expect the conditional marginal effects of the number of "remand" decisions to decrease as the level of learning capacity increases. I expect that at greater levels of learning capacity, a state faces greater opportunity costs associated with future initiation of a regional dispute while these opportunity costs decrease as learning capacity decreases. This is derived from the proposition explained in chapter two; states with lower levels of learning capacity have a smaller divergence between expectations and outcomes. As a result, these states likely pursued the dispute to the ruling phase with the belief that a ruling would be unfavorable due to pressures from domestic groups or another consideration. This reduces the opportunity costs associated with future regional dispute initiation.

The final type of decision issued, "mixed" decisions provides information about both the consistency and inconsistency of the respondent's policy to the relevant trade laws of the international trade agreement. Providing multifaceted information about the relevant policy in the dispute provides a state the opportunity to update its expectations and beliefs in a multifaceted way. The potential complainant can look to these decisions issued in previous disputes when it participated as a respondent to see the way in which it was previously right and wrong about the legality of its policy and its obligations as a member of the international trade agreement. I thus expect that states to engage in complex learning as a result of the more nuanced rulings issued by the dispute settlement body. This will directly influence the likelihood of selecting a forum to resolve a future international trade dispute. These types of decisions provide the greatest contribution to the state's dispute resolution infrastructure. In so doing, I expect that "mixed" decisions increase the likelihood of a regional trade dispute settlement body playing a stumbling block role in the resolution of international trade disputes. A more nuanced understanding of the aspects of policies that are consistent with the laws of the international trade institution allow a state to have greater confidence in its expectations about costs and benefits of litigating a regional dispute relative to litigating a multilateral dispute at the WTO. I thus expect that the

conditional marginal effects will exhibit a positive sign and that they will increase as the state's learning capacity increases.

As I have demonstrated, there are reasons to suspect that the different types of decisions issued by the regional dispute settlement bodies should have divergent effects on the stumbling or building block effect of these bodies. These arguments are empirically tested below. To test my hypotheses, I utilize data on the decisions issued before the dispute settlement body of the North American Free Trade Agreement (NAFTA). I have read the decisions issued by the NAFTA panels and Extraordinary Challenge Committees (ECC) associated with each of the disputes brought before the NAFTA. From these rulings, I characterized a decision as fitting into one of the three categories laid out above: affirm, mix, and remand. After characterizing each of the rulings as such, I coded variables that provided a count of the number of affirm, mix, and remand decisions issued in previous disputes where the complainant has participated as a respondent within the same subject areas.[19]

The classification of the ruling as one of those three types was based on the overall decision of the body – i.e., whether or not the body upheld the various elements of the disputed policy as consistent with the relevant international trade laws or deemed to be inconsistent – as well as the unanimity associated with that decision. A decision is considered to be the "affirm" type when the NAFTA panel decision notes that the measure at the heart of the dispute is not inconsistent with the obligations under the NAFTA agreement and/or the panel notes that it has affirmed the measure. A decision is counted as "remand" when the NAFTA panel decision notes that the measure at the heart of the dispute is inconsistent with NAFTA obligations and orders that it be remanded, i.e., sent back, to the domestic investigating authority to be changed so that it is consistent with relevant trade laws. Both "remand" and "affirm" decisions are coded as such so long as there is unanimity or few and/or weak dissentions. A "mixed" decision is a decision that includes both rulings on the inconsistency or affirmation of the measure and/or a decision that has a large number of dissentions from the panelists. This captures those

[19] I have also generated variables that captures the number of affirm, mix, and remand decisions across subject areas.

disputes where the decision(s) neither unilaterally supports nor denies the legality of the measure that generated the dispute.

The quantitative analysis of my hypotheses regarding the differential effect of different types of decisions not only supports my main argument regarding the stumbling block effect of regional dispute settlement bodies – and how it varies based on learning capacity – but it also provides a unique empirical contribution. This set of empirical tests is the first effort to disaggregate previous NAFTA experience to assess its role on forum choice. In the context of this larger project, doing so allows for a better assessment as to whether or not the NAFTA dispute settlement forum is stumbling or building block toward multilateral trade dispute resolution. Beyond its contribution to the research herein, coding the different types of decisions will allow for a more nuanced understanding of some of the phenomena previously studied on trade dispute settlement resolution.[20] Further, it enhances the research of trade dispute settlement at regional and multilateral bodies by demonstrating that it is not just the progression of the dispute that matters but also what the dispute settlement body says about the dispute that has an influence on future state actions/behavior.

[20] For a review of the literature, please see chapter one.

**Table 5.4: Influence of Different Types of Panel Decisions in NAFTA Disputes, Same Subject Area**

| | Model 6 | | | Model 7 | | | Model 8 | | | Model 9 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | NAFTA | WTO | NAFTA & WTO | NAFTA | WTO | NAFTA & WTO | NAFTA | WTO | NAFTA & WTO | NAFTA | WTO | NAFTA & WTO |
| # Affirm Decisions $_{i\,s\,t-1}$ | 19.26*** | 110.1*** | 59.44** | 0.588 | -0.701 | 3.159* | -9.013** | 9.170 | 3.996 | 1.690*** | -84.04*** | 2.191*** |
| | (5.233) | (31.82) | (25.92) | (1.215) | (2.233) | (2.402) | (5.274) | (13.35) | (12.51) | (0.580) | (5.319) | (0.437) |
| # Affirm Decisions $_{i\,s\,t-1}$ X GDP pc $_{i\,t-1}$ | -1.756*** | -11.06*** | -5.497** | | | | | | | | | |
| | (0.495) | (3.020) | (2.538) | | | | | | | | | |
| # Affirm Decisions $_{i\,s\,t-1}$ X Sector Exports $_{ij\,s\,t-1}$ / Total Exports $_{ij\,t-1}$ | | | | -0.515 | -1.190 | -0.156 | | | | | | |
| | | | | (0.873) | (0.929) | (1.353) | | | | | | |
| # Affirm Decisions $_{i\,s\,t-1}$ X Sector Exports $_{ij\,s\,t-1}$ / GDP $_{i\,t-1}$ | | | | | | | -0.853** | 0.557 | -0.785 | | | |
| | | | | | | | (0.388) | (1.151) | (1.188) | | | |
| # Affirm Decisions $_{i\,s\,t-1}$ X Power $_{ij\,t-1}$ | | | | | | | | | | 0.320 | -31.72*** | -0.855 |
| | | | | | | | | | | (0.312) | (2.589) | (1.008) |
| # Mixed Decisions $_{i\,s\,t-1}$ | 11.20*** | 130.2*** | -208.7*** | 0.0862 | -6.557* | -8.165** | 1.962 | -36.68 | -534.6*** | -0.458*** | -21.91*** | 5.774*** |
| | (2.054) | (15.98) | (79.41) | (0.304) | (4.837) | (4.958) | (2.591) | (32.23) | (53.40) | (0.0512) | (8.636) | (1.077) |
| # Mixed Decisions $_{i\,s\,t-1}$ X GDP pc $_{i\,t-1}$ | -1.124*** | -17.79*** | 19.79*** | | | | | | | | | |
| | (0.210) | (2.252) | (7.531) | | | | | | | | | |
| # Mixed Decisions $_{i\,s\,t-1}$ X Sector Exports $_{ij\,s\,t-1}$ / Total Exports $_{ij\,t-1}$ | | | | 0.355 | 7.200*** | -1.544 | | | | | | |
| | | | | (0.308) | (1.530) | (2.028) | | | | | | |
| # Mixed Decisions $_{i\,s\,t-1}$ X Sector Exports $_{ij\,s\,t-1}$ / GDP $_{i\,t-1}$ | | | | | | | 0.191 | -0.243 | -37.92*** | | | |
| | | | | | | | (0.207) | (1.982) | (3.921) | | | |
| # Mixed Decisions $_{i\,s\,t-1}$ X Power $_{ij\,t-1}$ | | | | | | | | | | -0.387*** | -0.217 | 119.3*** |
| | | | | | | | | | | (0.116) | (3.362) | (21.48) |
| # Remand Decisions $_{i\,s\,t-1}$ | -5.946* | -93.80*** | 36.71*** | -0.0453 | -7.863** | -2.065 | -1.993 | -48.62*** | 6.431 | 0.247*** | 42.77* | 0.419** |
| | (3.999) | (38.96) | (2.126) | (0.553) | (4.041) | (2.074) | (1.612) | (4.976) | (21.10) | (0.0694) | (27.94) | (0.184) |
| # Remand Decisions $_{i\,s\,t-1}$ X GDP pc $_{i\,t-1}$ | 0.608* | 9.893*** | -3.452*** | | | | | | | | | |
| | (0.394) | (3.839) | (0.193) | | | | | | | | | |
| # Remand Decisions $_{i\,s\,t-1}$ X | | | | -0.215 | -5.454*** | -2.562*** | | | | | | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sector Exports $_{ij\,s\,t-1}$ / Total Exports $_{ij\,t-1}$ | | | | (0.557) | (2.189) | (1.093) | | | | | | |
| # Remand Decisions $_{i\,s\,t-1}$ X Sector Exports $_{ij\,s\,t-1}$ / GDP $_{i\,t-1}$ | | | | | | | -0.180* | -4.189*** | -0.290 | | | |
| | | | | | | | (0.139) | (0.510) | (1.667) | | | |
| # Remand Decisions $_{i\,s\,t-1}$ X Power $_{ij\,t-1}$ | | | | | | | | | | 0.111 | 530.4* | -1.732*** |
| | | | | | | | | | | (0.242) | (383.4) | (0.164) |
| # NAFTA Disputes $_{i\,s\,t-1}$ | 0.116* | -1.606** | -0.367** | 0.101 | -0.296 | -0.467*** | 0.125* | -0.792* | 0.171 | 0.108 | -1.195** | -0.271 |
| | (0.0708) | (0.930) | (0.167) | (0.0913) | (0.310) | (0.0691) | (0.0902) | (0.502) | (0.640) | (0.113) | (0.726) | (0.212) |
| # WTO Disputes $_{i\,s\,t-1}$ | 0.590** | 1.962 | 1.236*** | 0.602** | 1.774** | 3.752*** | 0.711** | 2.068* | 13.73*** | 0.652** | 1.752* | 0.900** |
| | (0.293) | (1.608) | (0.360) | (0.280) | (1.071) | (0.468) | (0.410) | (1.315) | (0.873) | (0.385) | (1.204) | (0.441) |
| # Third Party $_{i\,t-1}$ | -0.0224 | -0.248 | -0.270** | -0.0467 | -0.236* | -0.160 | -0.0120* | -0.142 | -0.0492 | -0.00386 | -0.152 | -0.229* |
| | (0.0254) | (0.269) | (0.149) | (0.0409) | (0.164) | (0.247) | (0.00808) | (0.174) | (0.178) | (0.0133) | (0.140) | (0.143) |
| Power $_{ij\,t-1}$ | 0.680 | -10.35*** | -5.839 | 0.198 | -8.325** | 2.293 | 0.643 | -6.065** | 11.05** | -0.563 | -9.292** | -7.722* |
| | (2.943) | (3.747) | (5.518) | (2.500) | (4.026) | (2.115) | (2.687) | (2.870) | (5.057) | (2.388) | (4.160) | (5.241) |
| GDPpc $_{i\,t-1}$ | 0.143 | 9.459** | -2.916 | 0.0201 | 5.700*** | -19.59*** | 0.00385 | 4.337** | -56.03*** | 0.340 | 7.538*** | -0.141 |
| | (0.647) | (5.089) | (2.831) | (0.620) | (2.108) | (4.166) | (0.858) | (2.399) | (8.294) | (0.596) | (2.893) | (2.098) |
| GDPpc $_{i\,t-1}$ | -0.328** | 4.207*** | -0.786 | -0.120 | 3.461** | -2.863** | -0.209 | 3.283 | -1.020 | -0.140 | 6.827** | 0.365 |
| | (0.188) | (1.212) | (0.697) | (0.215) | (1.907) | (1.555) | (0.617) | (3.320) | (2.070) | (0.356) | (3.776) | (0.874) |
| Sector Exports $_{ij\,s\,t-1}$ / Total Exports $_{ij\,t-1}$ | -0.431 | 5.047** | 0.815 | 0.0255 | 3.147 | -3.479** | -0.425 | 0.690 | -24.88*** | 0.329 | 4.928** | 2.986** |
| | (1.383) | (2.254) | (1.978) | (1.211) | (3.195) | (1.726) | (1.185) | (1.890) | (1.177) | (1.143) | (2.689) | (1.306) |
| Sector Exports $_{ij\,s\,t-1}$ / GDP $_{i\,t-1}$ | 0.815 | -5.788*** | -0.100 | 0.373 | -3.746 | 5.045*** | 0.785 | -1.123 | 29.32*** | -0.0209 | -5.628** | -2.289 |
| | (1.543) | (2.405) | (2.973) | (1.321) | (3.184) | (1.581) | (1.424) | (1.834) | (2.148) | (1.271) | (2.760) | (2.365) |
| Trade/GDP $_{i\,t-1}$ | 0.764 | -8.155** | -14.70*** | 0.673 | -9.437** | -11.83*** | 0.888 | -11.26* | -59.16*** | 0.241 | -7.960* | -13.41** |
| | (3.178) | (3.750) | (5.946) | (2.806) | (5.193) | (4.718) | (2.949) | (7.614) | (11.43) | (2.765) | (5.124) | (6.719) |
| Polity2 $_{i\,t-1}$ | -0.397* | -1.180 | 4.998*** | -0.290* | -0.509*** | 13.81*** | -0.366*** | -0.512 | 41.17*** | -0.320** | -0.907* | 2.678*** |
| | (0.248) | (1.045) | (1.607) | (0.186) | (0.148) | (3.654) | (0.0983) | (0.699) | (6.800) | (0.168) | (0.613) | (0.201) |
| Polity2 $_{i\,t-1}$ | -0.138 | 0.0830 | 0.139 | -0.0985 | -0.343 | -0.133 | 0.111 | -0.161 | -3.952*** | 0.0444 | 0.136 | 0.280 |
| | (0.454) | (0.492) | (0.738) | (0.292) | (0.276) | (0.540) | (0.330) | (0.908) | (0.317) | (0.286) | (0.561) | (0.633) |
| t | -0.0302 | 5.757** | -6.569** | -0.271** | 6.669*** | -6.810** | -0.422* | 6.639*** | -26.64*** | -0.0202 | 6.015** | -5.497* |
| | (0.348) | (2.960) | (3.984) | (0.120) | (1.935) | (3.723) | (0.279) | (2.252) | (6.981) | (0.208) | (2.880) | (3.358) |
| $t^2$ | -0.100 | -7.891*** | 2.893* | 0.00151 | -7.994*** | 2.970** | 0.103 | -8.494*** | 12.53*** | -0.115 | -7.766*** | 2.276* |
| | (0.250) | (1.354) | (1.794) | (0.176) | (0.708) | (1.687) | (0.186) | (0.928) | (2.893) | (0.180) | (1.573) | (1.388) |
| $t^3$ | 0.00439 | 0.566*** | -0.305* | -0.00888 | 0.570*** | -0.296* | -0.0416*** | 0.611*** | -1.263*** | 0.00543 | 0.557*** | -0.218* |
| | (0.0236) | (0.0876) | (0.207) | (0.0261) | (0.0451) | (0.186) | (0.00325) | (0.0609) | (0.283) | (0.0165) | (0.106) | (0.151) |
| NAFTA Dispute $_{ij\,s\,t-1}$ | 2.644** | 3.025* | 4.476** | 2.502** | 2.891*** | 5.243*** | 2.596*** | 2.705** | 13.34*** | 2.449** | 2.245** | 3.977** |

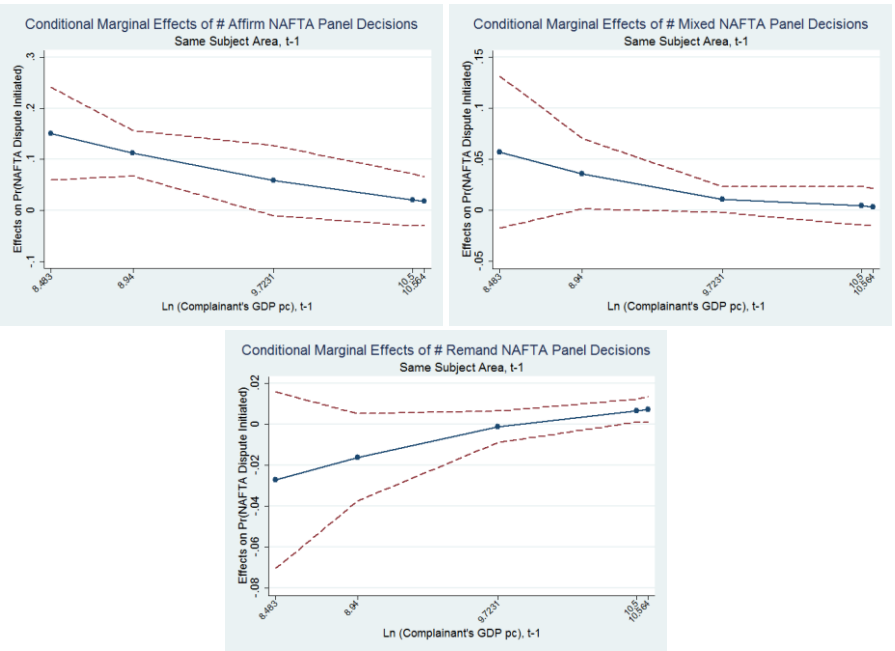
| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (1.273) | (2.178) | (2.087) | (1.097) | (1.193) | (1.271) | (1.116) | (1.172) | (1.854) | (1.205) | (1.285) | (1.809) |
| WTO Dispute $_{ij\ s\ t-1}$ | 2.356*** | 3.501** | 6.384* | 2.065*** | 2.683* | 6.683* | 2.064*** | 3.253*** | 22.90*** | 2.219*** | 3.244*** | 6.176** |
| | (0.351) | (1.651) | (4.038) | (0.413) | (1.746) | (4.155) | (0.508) | (1.357) | (4.798) | (0.492) | (1.229) | (3.544) |
| Both Forum Disputes $_{ij\ s\ t-1}$ | 3.825** | 5.261*** | 7.960** | 3.817*** | 4.391*** | 7.786*** | 4.071*** | 2.445*** | 20.35*** | 3.801** | 3.503** | 6.846** |
| | (1.728) | (2.199) | (4.387) | (1.477) | (0.939) | (2.195) | (1.515) | (0.406) | (3.901) | (1.789) | (1.680) | (3.530) |
| Constant | 10.41 | -172.1*** | 30.73 | 3.855 | -101.4* | 186.2*** | 7.192 | -52.47* | 718.8*** | -4.065 | -180.4** | -16.02 |
| | (18.10) | (70.57) | (49.02) | (16.00) | (71.25) | (42.03) | (19.60) | (38.42) | (89.80) | (13.10) | (78.50) | (35.19) |
| Observations | 450 | 450 | 450 | 450 | 450 | 450 | 450 | 450 | 450 | 450 | 450 | 450 |
| Pseudo R-squared | 0.4923 | 0.4923 | 0.4923 | 0.457 | 0.457 | 0.457 | 0.517 | 0.517 | 0.517 | 0.464 | 0.464 | 0.464 |

Robust standard errors in parentheses. Adjusted for 3 clusters in ccode1. Significance levels based on one-tailed hypothesis test. *** p< 0.01, ** p< 0.05, * p < 0.10

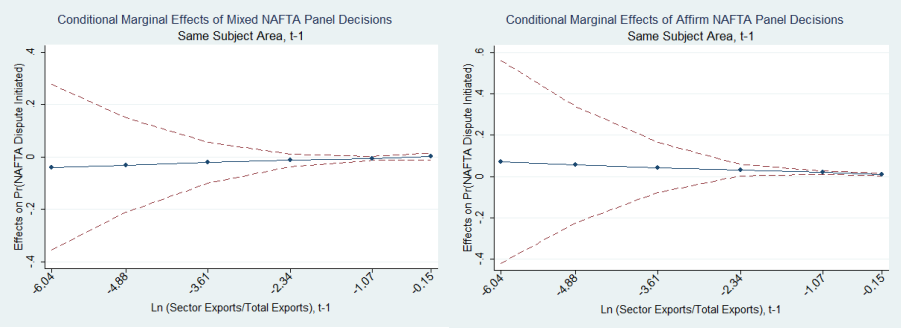
The empirical results associated with this section are reported in table 5.4. In this table, I estimate a series of models that capture the conditional effect of the number of each type of NAFTA panel decision in a particular subject area using each of the measures of learning capacity previously discussed. The effect of each type of decision when conditional on level of development, the ratio of sector exports to total exports, the ratio of sector exports to GDP, and the measure of economic power disparity in the dyad are reported in models 6 through 9, respectively. Each captures the stumbling block effect of the three types of NAFTA panel decisions. Across these models, I gather mixed findings on the significance and directional effect of the relevant component and interaction terms on the likelihood of initiating a NAFTA dispute relative to the likelihood of not initiating a dispute in the next year. In fact, these relationships range from the situation where all component and interaction terms attain statistical significance at conventional levels in model 6 to the case where none of these terms attain statistical significance in model 7, with models 8 and 9 demonstrating a mix of significance and non-significance for the component and interaction terms.

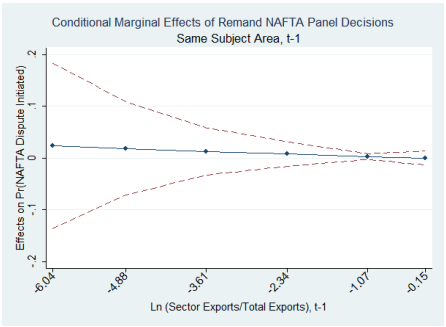
**Figure 5.7: Conditional Marginal Effect of Number of Different Types of Previous NAFTA Panel Decisions, Same Subject Areas**

*A. Conditional on Level of Development*

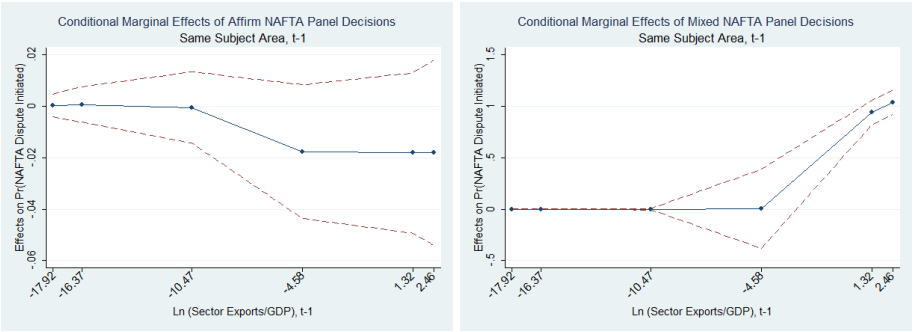


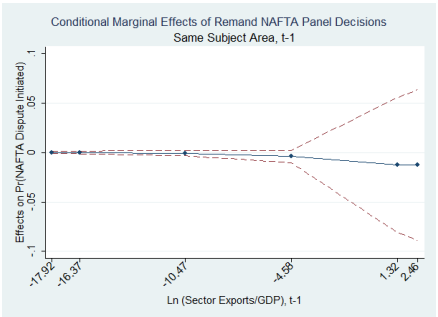
## *B. Conditional on Ratio of Sector to Total Exports*



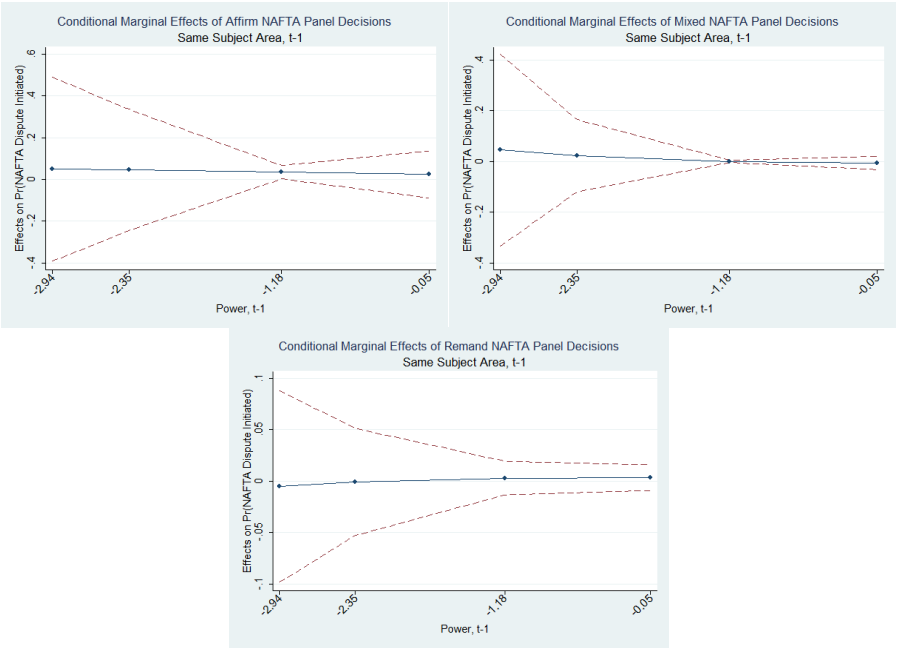




## *C. Conditional on Ratio of Sector to GDP*



*D. Conditional on Power*




Similar to above, I examine the conditional marginal effects to capture the effects of each type of panel decision on the likelihood of initiating a NAFTA dispute. In figure 5.7, I present the conditional marginal effects of the number of each type of decisions issued when conditioned by each measure of learning capacity, which are associated with models 6 through 9. The conditional marginal effects of the different types of NAFTA panel rulings – affirm, mix, remand –demonstrate that the effect varies across different types of decisions and based on the measure of learning capacity.[1] For space considerations, I only provide the graphs associated with predicting the likelihood of a potential complainant initiating a NAFTA dispute against the relevant NAFTA partner in a given year in a particular subject area.[2]

The conditional marginal effects demonstrate a number of interesting findings on the effect of previous types of NAFTA panel decisions. Looking first at the effect of each type when conditional on the level of development – captured in section A of figure 5.7 – an interesting relationship emerges. At lower levels of development – i.e., higher levels of learning capacity – the number of affirm and mixed

[1] The conditional marginal effects are also reported in Appendix A.2. I also report the conditional marginal effects for each type of decision for models estimated using "WTO Dispute Initiated" as the reference group.
[2] Marginal effects associated with predicting the likelihood of alternative dispute resolution alternatives are available upon request.

decisions exhibit a positive and statistically significant conditional marginal effect, which decreases as development increases. This positive and statistically significant relationship is also observed for the remand type of decisions at the highest levels of development. These findings are consistent with my expectations. However, at the low level of development, the conditional marginal effects show that an increase in the number of "remand" decisions issued is associated with a decrease in the likelihood of regional dispute initiation in the following year. While I did not expect the marginal effects to exhibit a negative sign, this result is consistent with my expectations. There are higher opportunity costs faced by states with greater learning capacity – i.e., states at low levels of development – which inhibits the ability and incentive to learn and why a negative and statistically significant marginal effect is observed when the level of development is low.

I receive much more limited support when using the other three measures of learning capacity, as demonstrated in sections B through D of figure 5.7. When learning capacity is captured by the ratio of sector exports to total exports, I find that the conditional marginal effects achieve statistical significance at higher levels for affirm type of decisions but only attain statistical significance at one level of this ratio for the mixed type and at no level for the remand type of decisions. For the affirm type, I find partial support for my expectations. While these conditional marginal effects exhibit a positive relationship – i.e., an increase in the number of affirm decisions in the previous year increases the likelihood of initiating a NAFTA dispute relative to the likelihood of initiating no dispute – the magnitude of the conditional marginal effects are not consistent with my expectations. As the dependence on subject area exports increases – which is associated with an increase in the learning capacity – the size of the conditional marginal effects associated with the number of affirm type of decisions decreases.[3] Also inconsistent with my expectation is the statistically significant and negative conditional marginal effect associated with the number of mixed types of decisions for the high level of the ratio.

[3] An increase in the number of affirm type decisions issued increases the likelihood of initiating a NAFTA dispute in the future by 3.1%, 1.9%, and 1.0% at the mean, high, and highest levels of the ratio of sector exports to total exports.

I also find limited support using the final two measures of learning capacity. When measuring learning capacity using the ratio of sector exports to GDP, I find that the conditional marginal effects are rarely able to attain statistical significance. At the high level of this ratio, the conditional marginal effects of the number of affirm and remand decisions attain statistical significance at conventional levels. Contrary to my expectations, this effect exhibits a negative relationship.[4] For the mixed type of decisions, the conditional marginal effects attain statistical significance at the two highest levels of that ratio; the effects of mixed types of decisions exhibit the relationships predicted above. When learning capacity is measured as the economic power disparity in the dyad, the marginal effects only attain statistical significance for the affirm type at the mean level of *Power*. I expect that this is due to the complexities associated with this measure. As discussed above, I expect that *Power* is capturing learning capacity, compliance considerations, and the trade-off between each when conditioning the effect of the number of decisions issued in disputes against a potential complainant. This is due to the fact that an increase in the number of remand and mixed decisions is associated with an increase in the need to alter or overturn certain policies and practices implemented by the potential complainant and/or its domestic industries.

Similar to previous analyses, I am not only interested in the effect of previous experience within a particular subject area but also across these subject areas. These figures are reported in appendix B.2. When learning capacity is measured as the level of development, I again find that the conditional marginal effects associated with affirm and mixed type decisions are statistically significant at lower levels while the conditional marginal effects of the remand type of decisions attain statistical significance at the higher levels of development. Again, an increase in the learning capacity – i.e., a decrease in the level of development – is associated with an increase in the conditional marginal effects, but only for the "affirm" and "remand" types of decisions.[5] The conditional marginal effects of the number of mixed

[4] At this level of the ratio, an increase in the number of affirm decisions is associated with a 1.8% decrease in the likelihood of initiating a NAFTA dispute relative to no dispute while an increase in the number of remand decisions is associated with a 0.4% increase in that likelihood

[5] At the lowest and low levels of the potential complainant's GDP per capita, an increase in the number of affirm decisions issued is associated with a 3.3% and 2.7% increase in the likelihood of initiating a NAFTA dispute, respectively. At the high and highest levels of development, an increase in the number of remand decisions issued is associated with a 0.51% increase in the likelihood that a NAFTA dispute is initiated, relative to the likelihood that no dispute is initiated.

decisions defy my expectations. While these effects are negative at the mean to lowest levels of development their negative effect also approaches zero as the level of development increases.

This result makes sense, however, when considering the discussion above regarding the role of opportunity costs. An increase in the number of decisions that both confirm and deny the legality of a policy in another or across subject areas may increase the difficulty in realizing the benefits – i.e., learning and updating a state's dispute resolution infrastructure – and the magnitude of potential opportunity costs associated with another such outcome in another dispute in the future. When considering this relationship, the observed effects of the conditional marginal effects of the number of "mixed" decisions are also explained. The magnitude of the negative marginal effects would decrease as learning capacity decreases since opportunity costs decrease as the level of learning capacity decreases. Using the other measures of learning capacity, I find very little support for my theoretical expectations for the counts of each type of decision issued by the NAFTA bodies across subject areas. The conditional marginal effects associated with the number of each type of decision fail to achieve statistical significance across nearly all of the different measures of learning capacity and different types of decisions. Other than the instances discussed above when learning capacity is measured as the level of development, in only one other case are the marginal effects statistically significant using the counts of each type of decision across subject areas.[6]

While the effects of each type of decision are consistent with the results presented earlier in this chapter and in the previous chapter, I am unable to find the same degree of robust support for my hypotheses as seen previously. To explain why this is the case, it is necessary to understand what makes these measures different from the measures of previous experience used in earlier chapters and sections. This measure is distinct because it considers not only the fact that a state's policy/action is accused of being incompliant with obligations as a member state of an organization and the independent activities of the relevant institution – as captured by the number of disputes initiated and number of decisions issued in

[6] At the mean level of the ratio of sector exports to GDP, an increase in the number of affirm decisions issued in disputes against the potential complainant is associated with a 1.3% increase in the likelihood that a NAFTA dispute is initiated in the following year, relative to the likelihood of not initiating a dispute.

disputes, respectively – but also a judgment on that policy/action made by the relevant institution. By measuring previous experience as the type of decision issued in previous disputes, this measure of previous experience expands the facets of the dispute resolution process captured, including the strategic legal approach taken by each of the involved parties, the success or failure of these approaches, potential compliance considerations, and the differences amongst the perspectives of the panelists in each dispute.

Disaggregating disputes to account for the different types of rulings emphasizes the differences inherent in these disputes, those that litigate them, and those that hear them. The latter element is especially important given the structure of the dispute settlement mechanism of the NAFTA; the binational panel varies by dispute. While there may be overarching elements a state can learn from each type of ruling, the specificity inherent in the respective interpretations may inhibit the usefulness of and/or ability to apply the knowledge gained in future disputes. The effect of the type of ruling may be further diminished based on the specifics of the previous ruling and the anticipation that a current dispute will reach the ruling phase. If the intended purpose of the dispute settlement mechanism is to reach a mutually agreed upon solution, the ruling of the body is less relevant in calculating expected costs, benefits, and outcomes. Additionally, these components of each type of decision issued may cause the measure of type of ruling to provide more limited support of my hypotheses because the knowledge acquired through each type of ruling has a greater effect on litigation strategy within a regional dispute and a much more limited effect on the decision to initiate a dispute and where to resolve it.

While I gain more limited support using the count of each type of decision issued across subject areas, the empirical results from this section provide evidence that regional dispute settlement bodies play a stumbling block role and that the ability to do so varies. Overall, the marginal effects associated with each type of decision demonstrate that previous dispute experience, when conditioned by learning capacity, influences future forum choice. Further, these results demonstrate that the type of decision issued influences the magnitude of learning and, as a result, the stumbling block effect. From each type of decision, a state can potentially gather insight about regional dispute resolution, but the ability to do so is impacted by the type of decision issued in the dispute.

## 5.4 Considering Alternative Mechanisms for the Relationship Between Previous Decisions and Forum Choice

While learning has been posited to explain the positive relationship between regional dispute settlement body use – including the number of decisions issued in a regional dispute – and future regional dispute initiation, it is not the only potential mechanism that can be used to understand this relationship. Specifically, arguments have been made in the literature that open up the possibility that this positive relationship could be a function of path dependence and/or the disparities in the costs of dispute resolution between the regional and multilateral alternatives. In the former explanation, the forum shopping decision is directly influenced and constrained by previous experiences; an initial choice can impact all future decisions. Inherent in this explanation is the idea that there are increasing returns, positive feedback, and/or self-reinforcement associated with repeated use of the same approach over time. In the latter alternative mechanism, the positive relationship is posited to be a function of the fact that the regional alternative is, compared to the dispute settlement body of the WTO, less costly in terms of litigation costs. However, I have argued that these mechanisms are unlikely to be the driving factor behind the observed conditional and positive relationship between previous experience, learning capacity, and future regional dispute initiation. This is further demonstrated when closely examining the empirical results in this chapter.

The first potential alternative mechanism – path dependence – would lead to the expectation that a higher number of decisions issued in past regional disputes not only lead to a higher likelihood of using a regional body but also a higher likelihood of using it in its adjudicatory capacity. As was the case in the previous chapter, the structure of my data helps to ensure that path dependence is a limited problem for my results. Recall that this chapter is examining the effect of decisions issued in disputes *initiated against* a state on the likelihood that the same state *initiates* a regional dispute in the future. While the body used to resolve a dispute is the same, the means of participation is entirely different. As a respondent, the decisions issued in disputes determine the extent of a state's non-compliance with obligations of the relevant organization and the resources utilized and/or needed to mount a feasible

defense for a state's trade policy or action and change that policy, if deemed non-compliant. In contrast, when a state acts as a complainant it is accusing another state of implementing a trade policy or action that is non-compliant with its obligations as a member of the regional arrangement. In the former, decisions issued are judgments of an independent body on the relative validity of a state's internal examination of a policy – i.e., its defense – and another state's external examination – i.e., its accusation and prosecution of wrong-doing – to reach a conclusion on the implementation of a particular policy/action. In the latter, a state is simply externally examining a policy of another state and advocating for its non-compliance. As a result, in these models in chapter five, it is not only the roles that differ but also depth of participation. The fact that I am examining distinct phenomenon aids in enhancing the confidence that the elements of path dependence play a limited role; proven success in defending one's own policies does not ensure success in a state's ability to identify and mount a legal attack against a policy implemented elsewhere.

Considering that one may still believe path dependence plays a role in understanding the relationship reported herein, I have also taken a number of empirical maneuvers to account for this alternative mechanism. First, each of the models included and reported in this chapter have cubic polynomials as regressors to account for the dependence over time of regional dispute initiation. Doing so accounts for repeated use of the regional body, which can generate a positive feedback and increasing returns associated with continued use of the regional body. With the inclusion of these cubic polynomials – in both the conditional and unconditional models of the effect of previous decisions issued – the positive and statistically significant coefficient and marginal effects are observed. The robust significance of my results with the inclusion of these cubic polynomials helps to demonstrate that, path dependence plays only a limited role in explaining the relationship between my key variables; the relationship and effect hold when accounting for the importance and role of time and temporal dependence.

Second, I have presented results that minimize the effect of the timing of decisions issued by utilizing cumulative measures, as discussed in section 5.1.1. By using a cumulative measure, I am consolidating the influence of decisions issued across a five year period; timing of a dispute within that

period is thus not taken into account. In so doing, I reduce the role of the sequence of disputes, which is important in theories of path dependence. The results remain positive and consistently statistically significant when using this long-run measure. My results are thus not contingent on the sequence of disputes in the past. Diminishing the relative importance of the timing of decisions does not eradicate the observed effect, which enhances support for the claim that learning is the key mechanism explaining the positive and conditional relationship between previous experience and future regional dispute initiation.

However, this method does not eliminate a potential role of this alternative mechanism; path dependence may still play a limited role in explaining the positive and consistently significant relationship between previous regional decision issued and future regional dispute initiation. Since concerns may still exist regarding whether or not the results are a function of path dependence, I have also re-estimated the unconditional model reported above using a duration model that accounts for stratification based on risk propensity group to account for the potential risk of failure – i.e., RTA dispute initiation – to further demonstrate that the positive relationship is not a function of the repeated occurrence of regional dispute initiation over time.[7] These results, which are reported in appendix A.2., continue to reveal a positive and statistically significant relationship between the number of decisions issued in previous disputes against a potential complainant and the likelihood that potential complainant initiates a regional dispute in the following year. This finding holds across all models, which use both the short- and long-run measures of decisions issued in disputes; the risk of failure increases as the number of decisions issued increases. This re-estimation provides further support that the learning mechanism posited – and not path dependence – is driving the observed results. The positive and statistically significant relationship between the number of decisions issued and the likelihood of future regional dispute initiation thus remains even when controlling for potential dependence over time and dependence on the frequency of past events.

Another alternative mechanism that could explain the relationship between my key variables delves into the potential allure of the regional body, which can be enhanced through repeated use: the relatively low cost of litigation and adjudication at the regional dispute settlement body relative to the

[7] Box-Steffensmeier and Zorn (2002)

dispute settlement body of the WTO. In this alternative understanding, a state chooses a regional disputes settlement body to resolve its dispute in order to minimize costs. However, this understanding fails to consider that there are elements of the regional body that make them potentially more costly than the World Trade Organization – i.e., a higher level of uncertainty may yield greater unobservable and/or unanticipated costs – and that it is still more costly than dispute resolution outside of formal bodies. This chapter, which focuses on the effect of the formal elements of the institution by looking at the effect of the number of decisions issued, examines the effect of one potentially costly phase of the regional dispute resolution process. However, this phase of the process feeds directly into the compliance phase, which is potentially much more costly given the absence of a formal enforcement mechanism at these regional bodies while one is available at the WTO.

While, theoretically, I expect this to be an unimpressive explanation for the relationship between the number of decisions issued in previous regional disputes and the likelihood of utilizing a regional dispute settlement body in the future to resolve international trade disputes when a multilateral alternative exists at the WTO, a number of included elements in these models and results demonstrate that this alternative mechanism is not driving the observed relationship. The structure of my empirical analysis helps to account for the fact that the regional dispute settlement alternative is not the least costly *overall* alternative. Specifically, I have included the possibility of resolution of an international trade dispute outside of formal dispute settlement bodies by including the "no dispute" category in my dependent variable. This category is inclusive of situations where there is no international trade dispute between the members of the particular dyad in a particular subject area, where there is a trade dispute that goes unresolved, and the situation where a dispute exists and the dyad seeks to resolve it bilaterally outside of the available formal organizations. If this mechanisms was working in conjunction with learning, i.e., the state was building its litigation capacity and understanding what was necessary to resolve a trade dispute, then the state would use the knowledge it acquired and select the *overall* least costly alternative – dispute resolution outside of formal bodies – to resolve disputes. However, none of these relationships are consistently observed across my models.

Further, the specific concepts of dispute resolution examined within this chapter present the most costly potential situation for regional dispute initiation. An increase in the number of decisions issued increases the costs associated with bringing a particular policy/action into compliance with the ruling and/or dealing with any repercussions associated with non-compliance. As the potential need to comply increases – i.e., the number of decisions issued in disputes against a potential complainant increase – the potential limitations and constraints increase on the potential complainant in its future forum shopping decisions. The first implication of this would be that the state is unable to utilize a formal mechanism at all. I should observe a negative coefficient associated with my key independent variable that indicates that an increase in the number of decisions issued is associated with a decrease in the likelihood of regional dispute initiation, relative to the likelihood of no dispute being initiated; this, however, is not observed in my results.

The second implication is that as the potential compliance and non-compliance costs increase with previous disputes, the state will be less likely to utilize a body that makes punishing non-compliance more difficult in order to minimize the potential costs associated with future compliance phases where this state needs to gain compliance from the other member of the dyad. In support of this, I would observe that the likelihood of initiating disputes at the WTO would increase because it provides a mechanism to deal with non-compliance and minimize potential costs associated with doing so. However, this is not observed. Given the absence of these findings, I have little confidence that differences in litigation costs between regional and multilateral bodies is driving the finding that the formal endeavors of the regional body – i.e., the number of decisions issued – is associated with a state's future decision to use a regional instead of a multilateral body to resolve international trade disputes.

## 5.5 Alternative Explanations For Forum Choice

This chapter has focused on the influence of previous decisions on future forum choice. However, this is not the only factor that can influence a state's decision to initiate a dispute and where to initiate it. In my models, I have controlled for a number of factors I expect to have an effect on a state's

forum shopping decisions given existing research. My control variables capture five general groups of explanatory factors: alternative learning opportunities, economic relationships and characteristics; political characteristics; and the specifics of the relevant regional trade organization. In this section, I revisit the expected relationships with each of these control variables. In so doing, I discuss their observed effect in the models estimated in this chapter on the likelihood of each dispute resolution outcome.

A key alternative explanation for forum choice is the availability of information through other sources. In order to accurately assess the stumbling block effect of regional dispute settlement bodies I must examine not only previous regional experiences but also alternative sources of information that a state can learn from and use to update its dispute resolution infrastructure. First, a state can potentially learn information that can influence forum choice from the decision(s) issued in disputes initiated at the WTO dispute settlement body. Based on the costs associated with WTO disputes, I expect an increase in the number of WTO decisions issued to negatively influence the likelihood of dispute initiation. Given the high costs associated with initiating a dispute at the WTO, an increase in these WTO decisions increases the resource constraints faced by a state for future initiation endeavors. As a result, a state is more likely to take what it has learned and apply that via resolution efforts outside of the formal dispute resolution system. When learning from WTO decisions, a state is able to learn about potential avenues and focal points that can be used to settle disputes. My results provide some support for these expectations.

Across all models associated with the short-term effect of previous WTO decisions, I find that an increase in the number of WTO decisions issued is associated with a decrease in the likelihood of WTO dispute initiation. However, using the cumulative measure of the number of WTO decision issued, I find that an increase in this measure is associated with an increase in the likelihood that only a WTO dispute is initiated. This is likely due to the fact that the pressures associate with the trade-off between learning and costs of WTO disputes are ameliorated over a longer time period. These measures also are associated with the other dispute resolution outcomes. When predicting the likelihood of regional dispute initiation,

the direction and significance of the coefficient of WTO decisions varies based on the measurement of the number of decisions issued.[8] My findings are also mixed when examining the relationship between WTO decisions and the likelihood of dispute initiation at both forums; a negative relationship is observed when using the short-term measure while a positive relationship is observed for the cumulative measure of WTO decisions issued.[9]

Given the findings in chapter four, I also control for the number of disputes initiated against a potential complainant. I include this measure as a control variable because decisions are not always issued in disputes and, if they are, they may not be issued in the same year a dispute is initiated.[10] Through this variable, I seek to capture other sources of information that states can use and learn from, which will influence the likelihood of dispute initiation at each of the relevant forum choice alternatives. For these measures, I use one of my robustness measures from the previous chapter. To control for the effect of disputes initiated, I include a count of all dispute initiated against a potential complainant in a particular subject area at the regional or WTO dispute settlement bodies. I use this measure because, first, this count is comparable to the measurement for the number of decisions issued; I look at the number of decisions issued in disputes initiated by *all* potential RTA members, not just one in particular. I also utilize this measure because the effects were weaker than the dyadic measure in the previous chapter. I expect using this measure will provide a stronger robustness test for my findings on the positive effect of the number of disputes initiated in regional disputes on the likelihood of future regional dispute initiation.

[8] When using the count of WTO decision issued across subject areas, an increase in WTO decisions issued is associated with a decrease in the likelihood that a regional dispute is initiated. This is model B2 reported in Appendix A.2. When using the number of WTO decision issued in the same subject area in the previous five years, I find a positive relationship between the number of WTO decision issued and the likelihood of regional dispute initiation. These models are model A1 and model A5, which are reported in Appendix A.2.

[9] The number of WTO decisions issued also influences the likelihood that decisions are issued at both available forums. An increase in the number of WTO decision issued in the previous year in the same subject areas – in models that account for the unconditional and conditional effect of regional experience – is associated with a decrease in the likelihood that a potential complainant initiates disputes against its regional partner at both the regional and WTO dispute settlement bodies. Looking at the cumulative effect a different relationship emerges; when re-estimating models 1 and 2 – which look at the unconditional effect and the effect conditioned by the level of development – I find that an increase in the number of WTO decision issued in the previous five years is associated with an increase in the likelihood that disputes are initiated at both forums by the potential complainant.

[10] In my models I also include a lag of my dependent variable to account for potential retaliatory motivations for dispute initiation. The count of regional disputes initiated and the lag of the dependent variable for the regional equation have a correlation coefficient of around 0.36. Overall, my results remain the same when omitting the lag of the dependent variable.

Each variable should exhibit a positive relationship with the likelihood of future dispute initiation at the same forum.

Across almost all models from this chapter, my empirical results demonstrate the robustness of the findings from chapter four. I find that an increase in the number of regional disputes initiated is associated with an increase in the likelihood that a regional dispute is initiated in the following year. I find more mixed results with regards to the effect of regional dispute initiation on the other dispute resolution outcomes. I find that an increase in the number of regional disputes initiated has a positive effect on the likelihood that both regional and WTO disputes are initiated in the following year in some of the specifications that use my alternative measures of the number of decisions issued. In a few of the models estimating the effect of each type of decision, I find the opposite relationship. In these models, the number of regional disputes initiated is negatively associated with the likelihood that disputes are initiated at both forums.[11] The number of regional disputes initiated in the previous year presents a consistent relationship, when statistically significant, with the likelihood of initiating only a WTO dispute in the following year. In a number of models, I find that an increase in the number of regional disputes initiated in the previous year is associated with a decrease in the likelihood that a WTO dispute is initiated, relative to the likelihood that no dispute is initiated. Looking to multilateral dispute experiences, I also find that previous experience influences future forum choice. Similar to the previous set of findings, I observe a positive relationship between previous experience at a particular forum and future use of that forum. For nearly all models, previous experience at the WTO as a respondent positively influences the likelihood of initiating a WTO dispute in the following year. I also find some support for a positive relationship between the number of previous WTO disputes initiated and the likelihood of the other dispute resolution outcomes.[12]

[11] Specifically, models 6 and 7 in table 5.2 and model A9 in tables in Appendix A.2.
[12] The positive relationship between the number of WTO disputes and regional dispute initiation is observed for the following: all models in table 5.2; models B1, B3, and B4 in tables in Appendix A.2. The positive relationship between the number of WTO disputes and initiation at both forums is observed for the following: all models in tables 5.1; all models in table 5.2; model A7 in tables in Appendix A.2.

At the WTO a state also has the opportunity to learn about dispute resolution through participation in disputes where the state is neither the complainant nor respondent. I also include a count of the number of times a potential complainant participated as a third party to a WTO dispute to account for this alternative form of experience. This measure is the number of times a potential complainant has formally requested and been approved for third party standing in a dispute before the WTO dispute settlement body. Recall, from my discussion in chapter three, that a state with third party standing has the right to be heard by, make written submissions to, and receive documents submitted to the WTO dispute settlement body. This type of experience is distinct from direct participation as a complainant or respondent because a third party state does not face the same litigation costs. It is thus a lower cost alternative to learn about dispute settlement at formal bodies. I find strong evidence for a negative relationship between this type of experience and the relevant dispute resolution outcomes. This relationship is robust when predicting the effect of third party experience on the likelihood of regional dispute initiation.[13] The negative effect of previous third party experience is less robust looking to the alternative dispute resolution outcomes. I find that the number of third party experiences in the previous year decreases the likelihood of dispute initiation at only the WTO or both the WTO and regional bodies in only a handful of models.[14]

Additionally, the economic characteristics and relationships between potential disputing parties can have an effect on the decision to initiate a dispute as well as the decision on which forum to utilize to resolve a dispute. To account for this, I include controls that capture the potential complainant's dependence on trade with its potential dispute partner, each partner's resource constraints, and dyadic economic power asymmetries. The importance of the trade relationship has a potentially strong independent effect on a state's trade initiation decision. As a state becomes more dependent on trade with

[13] I find that an increase in the number of times a state has participated as a third party decreases the likelihood that a regional dispute is initiated in the following year for models 1 through 5 and all the re-estimations of this model using a count of decision issued across subject areas and in the past five years. This relationship is also observed in a few of the models assessing the effect of each type of decision. These models are model 7 in table 5.2 and model A7 in Appendix A.2.

[14] The negative relationship between the number of third party experiences and the likelihood of WTO dispute initiation is observed in model 7 in table 5.2 model A6 in Appendix A.2. I find that an increase in this variable is associated with a decrease in the likelihood that disputes are initiated at both forums in models 6 and 9 in table 5.2 and model A7 in Appendix A.2.

its partner, the value of the precedent set in a regional or multilateral dispute as well as the expectations on the likelihood that a trade dispute will arise with this trading partner in the future will vary. Further, an increase in the dependence on trade will influence the potential costs associated with trade disruptions resulting from potential barriers enacted and/or disputes that go unresolved. Two of these three – *Sector Exports/GDP* $_{ij\,s\,t-1}$ and *Sector Exports/Total Exports* $_{ij\,s\,t-1}$ – are also used above to proxy learning capacity; the manner in which these variables influence the expected precedential value, likelihood of future disputes, and costs of unresolved disputes increases the incentive to learn. The final measure capturing the importance of trade, *Trade* $_{it-1}$, accounts for the larger impact of trade on the economic health of the potential complainant.

When accounting for the effect of both previous decisions issued and disputes initiated at the disputes settlement bodies of the relevant regional organization and the WTO, I find that trade is an important predictor of both the decision to initiate a dispute as well as the decision on where to initiate a dispute. For the first two measures described above, which capture the dependence on exports in a particular subject area, I find robust evidence that an increase in the dependence on those goods being exported is associated with an increase in the likelihood that a regional dispute is initiated in the following year.[15] The sign and significance of each of these measures varies, however, when predicting the alternative dispute resolution alternatives. For both measures of dependence on trade in a particular subject area, my findings are mixed regarding the effect on the likelihood of WTO dispute initiation.[16] When predicting the likelihood that disputes are initiated at both forums, the focus of the models is important. Looking at the overall effect of decisions issued, I find that an increase in *Sector Exports/GDP* $_{ij\,s\,t-1}$, is associated with an increase in the likelihood of dispute initiation at both forums while an increase in *Sector Exports/Total Exports* $_{ij\,s\,t-1}$, is associated with a decrease in the likelihood of

[15] This relationship is observed in all models in table 5.1, A.2.1, and A.2.2.

[16] An increase in *Sector Exports/GDP* $_{ij\,s\,t-1}$, is associated with an increase in the likelihood that a dispute is initiated at the WTO in the models in table A.2.2. It is associated with a decrease in the likelihood of a dispute being initiated at the WTO when examining the effects of each type of decision issued; specifically, in models 6 and 9 in table 5.2 and models A6 and A9 in table A.2.3. An increase in *Sector Exports/Total Exports* $_{ij\,s\,t-1}$ is associated with an increase in the likelihood that a WTO dispute is initiated in models 6 and 9 in table 5.2 and models A6 and A9 in table A.2.3. The negative relationship between this measure of dependence and the likelihood of WTO dispute initiation is observed for all models in tables 5.1 and A.2.2.

that outcome.[17] The relationships between each of the measures capturing the dependence on exports in a subject area and dispute initiation at both forums vary across the models examining the effects of the different type of decisions.[18]

I also find that it is not only exports in the particular subject area that influence the decision to initiate a dispute and where to initiate that dispute. The dependence on total trade of the potential complainant relative to its GDP exhibits a negative relationship across many models and for each of the outcomes in the dependent variable. When looking at the overall effect of decisions in the models, I find that an increase in $Trade/GDP_{i\,t-1}$ is associated with a decrease in the likelihood of dispute initiation at the regional body.[19] This negative relationship is also observed when predicting WTO dispute initiation; for nearly all the models estimated, an increase in the importance of overall trade to a state's GDP is associated with a decrease in the likelihood that a WTO dispute is initiated, relative to the likelihood that no dispute is initiated.[20] This measure also exhibits a statistically significant and negative relationship with the likelihood of initiating dispute at both forums in all of the models examining the effect of each type of decision issued.

Beyond trade, I expect that the economic characteristics, resources, and relationship of the parties will influence the decision to initiate and which forum to utilize. This expectation is based on the existing research on the role of available resources in explaining dispute initiation.[21] Available resources and the disparities in the resources between disputing parties can influence the feasibility and opportunity costs associated with pursuing a dispute at a particular forum or at all. One way in which I account for the role

[17] When statistically significant, this measure of dependence only exhibits a positive relationship with the forum choice alternative that involves both forums; an increase in the dependence on exports, relative to GDP, is associated with an increase in the likelihood that disputes are initiated at both the regional and multilateral forums for all models in tables 5.1, A.2.1, and A.2.2. Across models 1 through 5 and the re-estimations of these models, I find that an increase in dependence on dyadic exports in a particular subject area relative to total dyadic exports is associated with a decrease in the likelihood that disputes are initiated at both forums.

[18] An increase in the dependence on exports, relative to GDP, is associated with an increase in the likelihood that disputes are initiated at both forums in models 7 and 8 in table 5.2. In models 6 through 9, and their re-estimations, an increase in the dependence of exports in a subject area relative to total exports is positively related to the likelihood of regional and WTO dispute initiation in models 9 and A7 while negatively related in models 7 and 8.

[19] These models are in tables 5.1, A.2.1, and A.2.2.

[20] This relationship is observed for all models in tables 5.1, 5.2, A.2.1, A.2.3 as well as some of the models in table A.2.2.

[21] See, among others, Davis and Bermeo (2009) and Guzman and Simmons (2005). For more citations refer to the literature review in chapter one.

of these resources is by controlling for the gross domestic product per capita of both of the potential disputants. I find mixed relationships between the potential complainant and respondent's GDP per capita and each of the outcomes of interest. While an increase in the complainant's GDP per capita is associated with a decrease in the likelihood of a regional dispute being initiated in a handful of models,[22] the respondent's GDP per capita is positively associated with the likelihood of a regional dispute being initiated in all models examining the overall effect of decisions issued.[23] The complainant's GDP per capita is negatively related to the likelihood of a WTO dispute being initiated; this is found in nearly every model estimated.[24] In contrast, an increase in the respondent's GDP per capita is associated with an increase in the likelihood of a WTO dispute being initiated in the following year in nearly every model. When predicting the likelihood of dispute initiation at both forums, I find that, in nearly every model, an increase in the complainant's GDP per capita is associated with a decrease in the likelihood that disputes are initiated at both the regional and WTO dispute settlement bodies.[25] The respondent's GDP per capita exhibits the opposite relationship when statistically significant;[26] an increase in the respondent's GDP per capita is associated with a decrease in the likelihood that disputes are initiated at both the regional and multilateral dispute resolution forums.

I also expect that the disparity in the economic resources of the potential parties involved will influence the choice to initiate and forum choice. I expect that the asymmetries in economic resources capture the ability of one party to wield its influence over the other as well as the costs and benefits derived from resolving a dispute at a particular forum. The measure of economic power disparities in the dyad attains statistical significance in a handful of models when predicting the likelihood of dispute initiation at only the WTO or the WTO and the regional alternative. When examining the effect of each type of decision, I find that an increase in the potential complainant's relative economic power is

[22] These models are models 3, 4, and 5 in table 5.1, A3, A4, and A5 in table A.2.1, and model B5 in table A.2.2.
[23] These models are reported in tables 5.1, A.2.1, and A.2.2. The respondent's GDP per capita is negatively associated with the likelihood that a regional dispute is initiated in model 6 in table 5.2 and statistically insignificant in model 7.
[24] The complainant's GDP per capita is not negatively related with the likelihood of a WTO dispute being initiated is in models A1 and A2 in table A.2.1.
[25] The only exceptions are models 6 and 9 in table 5.2 and model A7 in table A.2.3.
[26] The coefficient is statistically significant in the models in table 5.1 as well as model 7 in table 5.2 and model A9 in table A.2.3.

associated with a decrease in the likelihood that a WTO dispute is initiated in the following year.[27] For all of the models associated with the overall effect of the number of decisions issued, I find that an increase in the potential complainant's economic power relative to its potential partner is associated with an increase in the likelihood that disputes are initiated at both the regional and multilateral forums.[28] I find a weak relationship between economic power disparities and the likelihood of each dispute resolution outcome when looking at the effects of each type of decision; I find a positive relationship between $Power_{ij\ t-1}$ and the likelihood of dispute initiation at both forums in model 8 while a negative relationship is observed in model 9, where this variable conditions the effect of each type of decision.

In these models I also account for the political constraints that may influence a state's forum shopping decision. To capture the ability of the domestic political institutions to shape these policies, I include the measure of democracy for the respondent and complainant extracted from the Polity IV data set. The strongest relationships observed with the complainant's level of democracy are observed when predicting the likelihood of disputes being initiated at only the regional body or at the WTO and regional body. In all models, an increase in the complainant's level of democracy is associated with a decrease in the likelihood that a dispute is initiated at only a regional forum and an increase in the likelihood that disputes are initiated at both available forums. The effect of the complainant's polity score is mixed when predicting the likelihood of a WTO dispute being initiated in the following year, relative to the likelihood that no dispute is initiated.[29] The respondent's level of democracy, however, consistently exhibits a negative relationship. For the models examining the overall effect of decisions issued and the effect of each type of decision issued, I find that an increase in the respondent's polity score is associated with a decrease in the likelihood that a WTO dispute is initiated as well as a decrease in the likelihood that disputes are initiated at both the WTO and a regional body.[30]

[27] These models are reported in the models in tables 5.2 and A.2.3.
[28] These models are reported in tables 5.1, A.2.1, and A.2.2.
[29] An increase in the complainant's level of democracy is associated with an increase in the likelihood this dispute resolution outcome in models A6 and A9 in table A.2.3 but a decrease in the likelihood in models A1, A3, A4, and A5 in table A.2.1, model B5 in table A.2.2, and model 7 and 9 in table 5.2.
[30] The models examining the overall effect of decisions issued are reported in tables 5.1, A.2.1, and A.2.2. For the models assessing the effect of each type of decision, this variable is statistically significant in models A6, A7, A8, and A9 in table A.2.3

In the models assessing the overall effect of decisions issued, I am examining data across regional bodies. I thus include a series of dummy variables to capture the influence of a particular regional body for these models. The specifics of the institution, its rules, and the composition of its members can influence not only the likelihood of dispute initiation but also the choice between that regional option and the multilateral alternative. Recall that the reference group for this set of variables is the dispute settlement body of the NAFTA. In the NAFTA, for example, the dispute is heard by a panel that varies by dispute. The procedure differs between the NAFTA and the other regional bodies included in this analysis. Other regional bodies in my analysis have been adapted to allow for the possibility for a dispute to be heard and adjudicated by multiple bodies. In its current state, the dispute settlement mechanism of the Central American Common Market allows for potential intervention by the Council and for a dispute to be heard and ruled on by an arbitration tribunal. Similarly, since 2004, when the Olivios Protocol was implemented, a dispute could potentially be heard by an ad hoc tribunal and/or the Permanent Review Tribunal at the Mercosur dispute resolution mechanism. The dispute settlement procedure of the Andean Community also can involve multiple bodies; however, this procedure differs in that there are the potential for administrative and judicial rulings issued by the General Secretariat and the Court of Justice, respectively. In contrast, the NAFTA disputes are repeatedly heard by the relevant ad hoc panel, unless some procedural error has occurred and there is a request for an Extraordinary Challenge Committee (ECC) panel, which can only vacate or remand not overturn a panel's decision. Based on these differences and others, it is important to account for and understand how the regional dispute settlement body that issued the decision influences a state's decision on where and when to initiate a dispute in the future.

From my results, I find that membership in a particular regional organization influences the likelihood of dispute initiation for each forum choice alternative. For the relevant models, the results indicate that, relative to membership in the NAFTA, membership in the Mercosur is associated with an

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when predicting the likelihood of a WTO dispute being initiated and model 8 in table 5.2 when predicting the likelihood of dispute initiation at both forums.

increase in the likelihood of regional dispute is initiated while membership in the CACM is associated with a decrease in the likelihood of regional dispute initiation, relative to the likelihood that no dispute is initiated. Relative to the NAFTA, the coefficients associated with membership in the Andean Community and Central American Common Market are associated with a decrease in the likelihood of dispute initiation at only the WTO as well as initiation of disputes at both the regional and multilateral forums. Membership in the Mercosur, however, is positively associated with the likelihood of WTO dispute initiation and negatively associated with the likelihood of dispute initiation at both forums. However, the coefficients associated with membership in the Mercosur are statistically insignificant when utilizing the cumulative measure of decision issued.

## 5.6 Assessing the Stumbling Block Effect of Regional Decisions

To what extent do regional dispute settlement bodies behave as stumbling blocks toward multilateral dispute resolution? Specifically, do states learn from their experiences at the regional bodies and apply what is learned in a way that makes them more likely to utilize the regional alternative to resolve disputes in the future even when a multilateral alternative exists? This chapter has examined the effect of a specific facet of previous experience and its effect on future forum choice in international trade disputes: the decision issued in previous disputes. This chapter has accomplished two important goals. Building on the findings from the previous chapter, it demonstrates the independent stumbling block effect of the regional trade dispute settlement body. The results of this chapter reveal that the number of decisions issued have a positive effect on the likelihood that a regional dispute is initiated in the future. I find that an increase in the number of decisions issued is associated with an increase in the likelihood that a regional dispute is initiated using measures that account of the number of decision issued in the same subject area in the previous year, across subject areas in the previous year, and in the past five years in the same subject area.

The results in this chapter also provide further insight into the dynamics of this relationship. Using decisions to proxy previous regional experience, I again uncover a conditional relationship between

previous experience and forum choice; a state's learning capacity influences the magnitude of the observed effect. The findings herein demonstrate that an increase in a state's ability and incentive to learn – i.e., it's learning capacity – increase the magnitude of the effect of previous regional experience on the decision to initiate a regional dispute in the future. Additionally, this chapter has demonstrated interesting results when looking at the effects of additional experiences. I expected to observe a non-linear relationship between the number of previous decisions issued and the marginal effects of these decisions on the likelihood of initiating a regional dispute in the future based on resources limitations faced by a state. However, this non-linear relationship was only observed when using the number of decision issued in the same subject area in the previous year to measure previous regional experience. Using the alternative measures of previous decision issued, I found a positive and linear relationship between increasing amounts of decisions issued and the marginal effects of these decisions on regional dispute initiation.

The second part of this chapter achieved insight into an unexamined relationship between the specifics of the decisions issued and future decisions to initiate a trade dispute and which forum to utilize when doing so. The findings in this section reveal that the relationship between previous experience and future forum choice remains when looking more closely at the nuances of each regional dispute experience. Looking at decisions issued in NAFTA disputes, the results demonstrate that the type of decision influences the strength of this relationship. Again, the magnitude of the effect varies based on learning capacity. The results in this section provide a large contribution to extant literature because these findings demonstrate insight into the nuances of the relationship between previous experience and future forum choice, and, as a result, the stumbling block effect of regional dispute settlement bodies. Each type of decision issued provides a different set of information and limitations that may influence the ability to learn and/or initiate future regional disputes. A key limitation of these results is the limited sample; I only test the effect of decisions issued in NAFTA disputes. Ideally, I would like to assess the effect of different types of decisions across the regional organizations in the larger data set. However, the consistency in many of the findings for this more limited sample demonstrates the strength of the overall

finding that previous regional dispute experience has an effect on future forum choice but that this effect is conditioned by a state's learning capacity.

This chapter helps to provide insight into the complex and dynamic relationship between previous experience, learning, and future forum choice. The empirical results demonstrate that it is not just the overall experience that has an effect. Further, I argue and demonstrate that it is the learning mechanism that explains the observed relationship. This is an important finding given the multifaceted nature of the dispute resolution process. These results demonstrate that the relationship between previous regional dispute experience and future forum choice is not driven by the formal discussions between disputants. Since many of these resolution efforts include some sort of consultation phase, it is possible that the results in the previous chapter were demonstrating that the effect was not a direct result of the actions of the dispute settlement body. However, the decisions issued are a direct action by the dispute settlement bodies and provide their interpretation on the dispute. As a result, future interactions are not determined by only the interactions between the disputing parties but also the insight provided by the formal institution. The results in this chapter thus demonstrate that the formal institutions provide a significant effect on forum choice and that this result indicates that regional experiences bring about additional regional experiences. In the next chapter, I synthesize the results presented herein as well as the results from the empirical analyses in chapter four. In doing so, I discuss the overall findings and arguments, their policy and scholarly implications, and ways in which these results can be built on and expanded in future research.

# 6.0 CONCLUSION: ASSESSING THE ROLE OF PREVIOUS EXPERIENCE IN REGIONAL FORUM CHOICE IN INTERNATIONAL TRADE DISPUTES

The widespread system of overlapping and nested trade dispute resolution systems provide a new pathway for states to deal with a diverse set of trade related issues. Based on the agreements notified to the World Trade Organization (WTO), there is extensive membership in institutions and agreements across the globe that can potentially complicate, undermine, or enhance the trade liberalization efforts inherent in the endeavors and negotiations associated with the WTO. These alternative mechanisms can be used to not only pursue trade liberalization but also to resolve international trade disputes between trade partners. The pervasiveness of regional trade organizations, and the dispute settlement components inherent within each of the organizations and agreements, raises questions regarding the role that these have in attaining resolution of the disputes and overall trade liberalization goals. Further, as regional trade dispute settlement mechanisms are more frequently used by states, it becomes increasingly important to understand how these overlapping organizations with differing procedures, memberships, and difficulties influence state capacities, choices, and behavior. Such opportunities emphasize the need for a comprehensive understanding of not only why a state selects a regional dispute settlement body to resolve an international trade dispute but also what influences this selection and why a state selects this alternative given that a similar or more sophisticated resolution body exists at the WTO.

The objective of this project has been to uncover the role that these regional dispute settlement bodies play within the larger trade dispute settlement network. I have also sought to develop an understanding of the presence and extent of the variation of the role of these regional bodies. The different capacities of the member states making the choice to utilize the regional body influence the likelihood of using a regional dispute settlement bodies and its larger effect in the network of trade organizations and agreements. From the previous chapters, it becomes clear that the existence and frequency of use of regional dispute settlement bodies is promising to larger trade liberalization and dispute resolution efforts. Specifically, these regional dispute settlement bodies provide not only the

chance for states to learn about the facets of implementing the trade liberalization elements of the relevant agreements but the opportunity for states overcome existing limitations to enhance their capacity to do so.

In this chapter, I revisit the argument, evidence, and conclusions reported in previous chapters. I first discuss the specifics of my theoretical claims that states are able to learn through previous use of regional dispute settlement bodies, which causes regional dispute settlement bodies to take on a stumbling block role in trade dispute resolution, and that the magnitude of the learning effect varies based on the characteristics of the state or dyad. In this discussion, I emphasis the role that development plays in this relationship and how learning-by-doing at regional dispute settlement mechanisms can help developing countries overcome or mitigate existing limitations and constraints faced when attempting to formally resolve a trade dispute with another member state of a regional trade organization. I then provide an overview of the evidence presented in support of my argument and proposed mechanism linking previous regional dispute experience and future forum choices in international trade dispute resolution. This chapter concludes with a discussion of the theoretical and practical implications of this research and avenues for expanding the arguments and findings herein in future research.

## 6.1 Advancing the Stumbling Block Effect of Regional Dispute Settlement Mechanisms

In order to uncover the role of regional dispute resolution bodies in the larger dispute resolution network, I have presented an argument that focuses on the relationship between previous use of the regional body and a state's future choice to utilize that regional dispute resolution mechanism to resolve an international trade disputes when a multilateral alternative exists at the World Trade Organization. In chapter two, I argued that through use of a regional dispute settlement body, a state is able to gain insight into the observable litigation costs, unobservable audience and compliance costs as well as the elements that contribute to the uncertainty surrounding those costs and the likelihood of attaining a particular outcome in the resolution of the dispute. In so doing, a state reduces the divergence between expectations and outcomes; it learns about resolving disputes at that regional forum. By learning, a state is able to

build up its dispute resolution infrastructure, which allows the state to minimize the costs of resolving a dispute regionally in the future and the uncertainty surrounding efforts to do so. By enhancing the dispute resolution infrastructure, a state is able to minimize the major drawback associated with using a regional dispute settlement body, i.e., the level of uncertainty.

Regional dispute settlement bodies are characterized by relatively lower litigation costs, relative to the dispute settlement body of the World Trade Organization (WTO), yet are characterized by relatively higher levels of uncertainty. This is due to the differences in the procedure and the availability of enforcement mechanisms. Specifically, the WTO is characterized by a relatively lower level of uncertainty given that, first, the dispute settlement body of the WTO is designed such that a standing body is available for appeal of an initial panel decision. Further, there are mechanisms available at the WTO to identify and punish non-compliance with rulings issued by the Panel and Appellate bodies of the dispute resolution mechanism of the WTO. Characteristics such as these provide a state with the ability to generate more accurate expectations regarding the costs and outcomes of a dispute. Through previous use of a regional dispute settlement body, states are able to generate more accurate expectations about these costs and outcomes of dispute resolution at the relevant regional dispute settlement body, which increases the relative value of using that regional body to resolve a dispute. Due to this, I argued that the regional bodies become increasingly attractive with increasing amounts of previous experience, which causes the regional dispute settlement body to plays a stumbling block role. Instead of facilitating and promoting the use of multilateral endeavors, previous regional experience encourages future regional use instead of use of multilateral endeavors.

Beyond my primary theoretical argument, which considers that regional dispute settlement bodies can play a stumbling block role in multilateral dispute resolution, the argument I presented in chapter two emphasizes the idea that even though learning occurs and influences future state decisions, the effect is not consistent across states. Similar to students in a classroom, states have varied abilities and incentives to learn and update expectations when presented with information about a particular issue or subject matter. In this section of chapter two, I argued that there are two key elements that vary how much a state

learns from its previous regional dispute experience and the extent to which the state applies what it learns in its future endeavors. These two elements are the ability and incentive to learn. Both the ability and incentive to learn generate and contribute to the size of the learning space, i.e., the divergence between initial and posterior beliefs on the cost and outcomes associated with regional and multilateral dispute resolution.

In my argument, I argued that the state's ability to learn is determined by the divergence between a state's *ex post* and *ex ante* beliefs about the costs, benefits, and outcomes associated with regional dispute resolution. I argued that the ability to learn increases as this divergence grows because when outcomes match expectations a state receives confirmation of its initial beliefs and will thus learn very little, if anything, that will be applied in future decision-making in international trade disputes and forum choice. The ability to generate the most accurate *ex ante* expectations is tied to a state's legal, economic, and political resources. With greater resources, a state is able to develop a more sophisticated dispute resolution infrastructure prior to engaging in any dispute at the regional or multilateral forum. Based on the understanding of the ability component of learning capacity, I hypothesized that development status is inversely related to this facet of learning capacity.

In so doing, this project delves into a component of extant research regarding the role of development and capacity constraints on a state's use of formal dispute resolution bodies. This research has demonstrated that developing countries face a certain set of disadvantages when using trade dispute settlement forums, particularly at the forum available at the WTO, and that experience at the WTO can influence the likelihood of using the WTO in the future.[1] My argument examined how development status not only influences the patterns of use of each of the different forum choices but also the manner in which development status influences the ability to learn and the extent of the adaptation of a state's behavior. In so doing, I demonstrate that the baseline resources do not necessarily determine the available alternatives; a state with lower baseline levels of economic, political, and legal resources has the potential

[1] See, among others: Bown (2004a, 2004b), Bown and Hoekman (2008), Busch and Reinhardt (2002, 2003a, 2003b), Davis and Bermeo (2009), Guzman and Simmons (2005), Hoekman and Mavroidis (1999), Horn, Mavroidis, and Nordström (1999), Michalopoulos (2001).

ability to independently improve its own capabilities in dispute resolution. This enhances findings in the existing research, which may not have adequately considered the possibility that there are independent, state-based mechanisms to overcome capacity constraints faced by developing countries at these dispute settlement bodies. The ability of developing countries to use this mechanism to increase capacity is especially important considering that a formal capacity building mechanism, which is available at the WTO Advisory Centre, is absent from regional trade dispute settlement mechanisms.

The second element of learning captures a state's incentive to gather information from previous experience, learn from it, and apply those lessons in future forum choices when seeking to resolve an international trade dispute at a formal body. In chapter two, I also argued that a state's incentive to gather, internalize, and apply information acquired from previous experience at a regional dispute settlement body is a function of the economic relationship between the disputing parties. This relationship influences the way in which a state views, interprets, analyzes, and applies the information acquired and/or the perceived cost(s) and benefit(s) of doing so. The incentive component of learning capacity captures the value of minimizing the divergence between *ex post* and *ex ante* beliefs on costs, benefits, and outcomes associated with using a regional dispute settlement body relative to those associated with use of the multilateral forum available at the WTO. Similar to the ability component of learning capacity, this element of learning capacity captures the differences between parties and the effect on learning. I argued that there are two economic relationships that are essential in understanding a state's incentive to learn: the strength and reliance on exports to the other member of the dyad and the economic power disparities in the dyad.

The final argument made in chapter two takes into account the relative costs of additional dispute settlement. My argument emphasizes the ability of states to learn from previous experience, apply those lessons to future forum choices, and the conditioning effect of learning capacity. I further develop my argument by considering the returns on additional experiences. In so doing, I again emphasize the importance of existing capacities in understanding the extent of learning that occurs from previous regional dispute experience. This final hypothesis weighs the material constraints generated by

limitations in available resources and counters alternative mechanisms, which are also given theoretical attention in this chapter, that posit that previous experience and the relative costs of regional dispute initiation imply that there should be increasing returns on future regional behavior given past regional behavior. I argued in chapter two that there are diminishing returns associated with previous regional dispute experience because the ability of a state to learn from its prior experiences is constrained by the available resources to pursue international trade dispute resolution and engage in activities to ensure compliance with previous rulings. As the amount of disputes initiated in a given year increases, a state faces additional constraints on its ability to initiate an additional dispute because its operating budgets are not unlimited. Further, I expect that there will be diminishing returns on the number of regional disputes initiated because a threshold will be reached where the amount of information that can be acquired does very little, if anything, to reduce the divergence between expectations and outcomes.

Considering the diminishing marginal returns of additional regional dispute settlement experience is important in developing an understanding of the extent and forms of disadvantages faced by developing countries at dispute resolution bodies and how these bodies can utilize their own experiences to overcome these limitations. Baseline limitations in available resources will exacerbate the potential diminishing returns of additional dispute experience. Further, developing countries may face greater difficulties in initiating a greater number of disputes at a given time because the opportunity costs associated with filing a dispute – i.e., the costs associated with failure – can be relatively greater. As a result, developing countries have a greater incentive to build up information through learning over time and operate at the lower levels of experience before the point at which diminishing returns are observed.

Beyond the theoretical discussion that leads to the derivation of my three hypotheses, in chapter two I also spent time conceptually discussing, developing, and discounting potential alternative mechanisms for a positive relationship between previous regional experience and future regional forum choice. To contribute to the confidence that the effective causal mechanism relating previous regional dispute experience to future forum choice is learning, it is essential to guard against and carefully consider competing explanations. While my argument focused on the premise that states learn from

previous experience and apply those lessons to future forum choices, there are potential alternative mechanisms that posit that the relationship is a function of path dependence and/or the relatively lower costs of utilizing a regional dispute settlement body. In my discussion in chapter two, I indicate that both alternative mechanisms, while theoretically plausible, are insufficient for understanding the positive relationship between previous experience and the likelihood of initiating a regional dispute in the future when a multilateral alternative exists at the WTO to resolve an international trade dispute.

While some of the elements of the first alternative mechanism – path dependence – are inherent in the learning mechanism described and defended herein, alone it fails to capture the dynamics of the relationship. In this mechanism, an observed positive relationship between an increase in the amount of previous experience and the likelihood of regional forum choice in future disputes is due to positive feedback associated with doing so. Not only does previous use increase capacity and reduce uncertainty, as is true in the learning mechanism developed herein, but it also constrains future decisions given that previous dispute resolution infrastructures have been established, disputes have been litigated, and/or preferred outcomes have been realized. This mechanism emphasizes the importance of the sequence of the disputes. However, disputes are likely overlapping and/or ongoing when forum shopping decisions are made. Additionally, use of the previous regional dispute body does not inhibit the ability to use the alternative. In fact there are instances in which states first utilize a regional dispute settlement body and then take the same dispute to the multilateral forum – e.g., a poultry dispute between Argentina and Brazil and a dispute over high fructose corn syrup between the US and Mexico – because of perceived failures in the regional resolution mechanism. Such examples reveal that there are unique challenges and distinct groups in each of these disputes that obstruct the prevalence of a positive feedback loop and/or increasing returns associated with regional dispute initiation, as would be observed if path dependence was the mechanism driving the relationship between previous experience and future forum choice in international trade disputes.

Alternatively, the disparities in the litigation costs between regional and multilateral dispute settlement bodies could be used to explain the relationship between previous regional experience and

future regional forum choice. However, I argued that this mechanism provides a simplistic understanding of the forum shopping calculation based on the disparities in the degree of uncertainty surrounding dispute resolution at each available forum. While the regional bodies are relatively less expensive in terms of observable litigation costs, they are also characterized by a much higher degree of uncertainty. These alternative mechanisms highlight the institutional facets that can drive the decision-making procedure. The learning mechanism inherent in my argument, in contrast, posits that the institutional components of the dispute resolution infrastructure are adaptable and responsive to both positive and negative experiences at the regional forum. By discounting each of these alternative mechanisms as being the driving force behind the positive effect of previous experience on the likelihood of initiating a regional dispute, I enhance the confidence in my argument and theorized learning mechanism.

## 6.2 Data and Evidence

To empirically test the hypotheses derived in chapter two, I used a newly collected, original data set on use of regional and multilateral dispute resolution mechanisms. I gathered data on use of the dispute settlement mechanisms of the Andean Community (CAN), Central American Common Market (CACM), Common Market of the South (MERCOSUR), North American Free Trade Agreement (NAFTA), and World Trade Organization (WTO) between 1995 and 2010 in eight distinct subject areas. As pointed out in chapter three, this data set improves upon existing research by capturing the heterogeneity in the avenues available to a state to resolve a dispute and ways in which a state uses a dispute settlement body. Specifically, I have gathered data that captures the choice *between* dispute resolution alternatives as well as the different facets of experience at regional and global dispute settlement mechanisms and the effect of learning capacity on forum shopping choices. To capture the different facets of a state's experience at a regional or global and multilateral dispute settlement body, I gathered data on the general use of the forum – i.e., the initiation of a dispute at this forum – and the forum's role in the resolution – i.e., the decisions issued in a dispute – as well as the differences in the forum's rulings across disputes.

In chapters four and five, I presented the statistical analyses that test my three primary hypotheses regarding the positive effect of previous regional dispute experience on the likelihood of future regional dispute initiation, the conditioning effect of learning capacity, and the diminishing returns associated with additional regional dispute experience. Chapter four represents my first set of quantitative results. I assessed the stumbling block effect of regional dispute settlement mechanisms by considering the effect of general use of the body in the past on the state's decision to initiate regionally in the future. To capture this, I used the number of disputes initiated against a state to measure previous regional dispute experience; this aggregates disputes that are resolved without the formal adjudication procedure as well as those disputes that utilize the standing and/or ad hoc body to issue a ruling on the dispute.

Across the results presented in chapters four and five, I find strong support for my three hypotheses. Using different measures of previous regional dispute experience, different model specifications, and variations in the spatial and temporal understandings of when and where learning occurs, I found that an increase in previous regional dispute settlement experience is associated with an increase in the likelihood that a regional dispute is initiated in the future. Further, I find that learning capacity matters when considering the effect of previous experience on future forum choices. Specifically, I disaggregate learning capacity into two parts: the ability and incentive to learn from previous experience. The ability to learn is captured by the state's level of development. The incentive to learn is captured by the economic relationship between the members of the dyad involved in the international trade dispute. In each of the models in chapter four, I find that not only does previous regional dispute initiation experience positively predict the likelihood of regional dispute initiation but also that the marginal effect of an increase in this experience increases as each of the measures of learning capacity – i.e., level of development, dependence on dyadic exports, and economic power disparities – increases. This result is robust to specifications that account for dependence over time, retaliatory behavior, and other alternative explanations. These quantitative results are further supported by anecdotal evidence of dispute initiation behavior. From each of these models, I also found that there are diminishing marginal returns associated with the effect of regional dispute experience on the likelihood of

initiating a regional dispute. As the resource and capacity constraints levied on a state increase due to increasing amounts of simultaneous experience, the ability of a state to garner and utilize meaningful information from prior experiences is diminished; this decreases the marginal effect of additional regional dispute experience on the likelihood of utilizing the regional body in the future.

While the results in chapter four demonstrate support for my hypotheses, they face a key limitation, which I address in my analyses in chapter five. Specifically, using a measure of previous regional dispute experience that captures the overall dispute resolution effort does not conclusively demonstrate that regional dispute settlement bodies behave as stumbling blocks toward multilateral dispute resolution. This is due to the fact that not all disputes initiated by a state move beyond the consultations or diplomatic negotiations phase. Disputes that fail to proceed beyond this phase do not realize the total independent effect of the regional body itself in the attempt to resolve a trade dispute. To capture the exact effect of the regional body and address this deficiency, I re-conceptualize previous regional dispute experience in chapter five. I measure previous experience to capture another phase in the multi-faceted dispute resolution process: the number of decisions issued in regional disputes. By capturing the effect of the institution and its interpretation of a dispute, I again found that previous experience has an effect on a state's future forum shopping decision in the expected ways. This finding enhances the confidence in the validity of the expectations derived herein given that an increase in the number of decisions issued simultaneously implies an increase in the potential compliance or enforcement costs faced by a state when deciding whether or not to utilize a formal dispute settlement mechanism to resolve a current international trade dispute. The results of chapter five demonstrated that the formal institutions – and not just the ability of states to negotiate within these institutions – have an important influence on forum choice in future international trade disputes.

In this chapter, I also disaggregated the content of these decisions to examine the effect of each type of decision on future forum choice. Using data on decisions issued by the panels at the NAFTA dispute settlement body, I categorize the decisions into three types: decisions affirming the legality of the contested policy; decisions that determine the policy/practice to be inconsistent with the rules of the

institution; and decisions that include both affirmative and inconsistency elements within the rulings on a particular policy/practice. The positive and conditional relationship between previous experience and future forum choice remains when examining the nuances of the decisions issued in regional disputes. However, I received much more limited support for my expectations when examining the heterogeneity of the regional decisions issued. This is likely due to the fact that information varies across dispute type; each type of decision provides a different set of information that may influence what a state learns and if a state can apply that information to future forum shopping decisions. It is the aggregation of the information provided across different types of decisions that provides a state with the most comprehensive understanding as to how the panel interprets the relevant laws and obligations as a member state of the regional body, which allows the state to best minimize costs and uncertainty.

One key insight provided by my empirical discussion in chapters three through five is the manner in which learning varies. Beyond my main analyses, which consider and find that the effect of previous experience varies based on learning capacity, I also varied my analyses to uncover the temporal variations in learning from previous regional experience. To do so, I first looked at the relative strength of learning in the immediate past and then considered learning as a cumulative endeavor. I captured the short- and long-run effect of experience by varying the temporal understanding of previous regional dispute experience. To do so, the amount of previous experience was measured as the number of disputes in the previous year for short-term models and the total amount of previous experience over the previous five years for cumulative learning models. Time is not the only element that can yield variation in the effect of learning; I also considered the potential for variations in the magnitude of learning within and across dyads and subject areas. It is important to consider the intra- and inter-dyadic and subject area effects because the applicability of information gathered in a particular dispute may vary for future disputes.

These results demonstrated that regional dispute settlement mechanisms behave as stumbling blocks toward multilateral dispute resolution. Use of a regional body is expected to yield future use of that regional body instead of utilization of the dispute settlement body of the World Trade Organization. The information and experience acquired while resolving a dispute at a regional dispute settlement body

facilitates learning, which reduces costs and uncertainty surrounding future use of that body. This increases the relative benefits of using a regional body even though a legitimate, highly effective, and well-established alternative is available at the WTO. Further, the findings in chapters three through five demonstrated that previous experience – and the learning mechanism associated with my argument – provide the most comprehensive and robust support in explaining why a state initiates a regional dispute given that a global, multilateral alternative exists at the WTO. Expectations associated with the effect of economic and political characteristics and alternative mechanisms do not demonstrate the same overwhelming support as is received for my theoretical expectations.

## 6.3 IMPLICATIONS

This project has several broad implications that can contribute to the endeavors of individuals in the scholarly and policy communities. In terms of the theoretical implications, a picture emerges from the argument and findings in this project regarding the ways in which state behavior varies, is adapted over time, and how limitations can be overcome. This project shows that questions of the importance and effectiveness of international institutions is best understood by examining the conditions under which, and when, international institutions have an effect on state behavior. Furthermore, this project has demonstrated the importance of understanding the relationship and interdependence between international institutions when examining state behavior and choices within a particular institution. In so doing, I provide nuance to existing studies on the role of international institutions, how international institutions can inhibit the effectiveness of similar and/or overlapping institutions, and the conditioning effect of state characteristics on the use and effectiveness of these organizations.

This project emphasizes the importance of how the past shapes the present. Specifically, how policy endeavors and experiments provide insight to policy-makers regarding what succeeds and what fails and how that is used in future decisions and policy-making. In so doing, the project has demonstrated the virtues of moving beyond the most simplistic version of events to account for the variation and adaptation of perspectives, approaches, and the ultimate action taken. In particular,

examining the effect of the context under which certain events take place. By considering the variations in the context, I have been able to garner insight into how, when, and the extent to which previous experience can influence future decisions. The importance of the context of the interaction demonstrates the importance of moving beyond examining only the effect of institutional facets and state characteristics on state behavior; these institutional features can influence both the short- and long-run by structuring the type and amount of information acquired by a state as well as the potential success or failure of a particular endeavor.

This study emphasizes the ability of states to learn about the systems through experience and adjust their behavior according to those experiences. Such insight provides a deeper understanding about the adaptation of approaches to resolve international trade dispute and/or the characteristics of the dispute resolution mechanism itself. Particularly important is the influence of learning capacity in understanding how states adapt and evolve tactics to achieve certain goals. While the conditioning effect of such elements is built from a recognition that learning varies across time and actors, incorporation, consideration, and/or contextualization of the environment is not universally integrated into understandings of state behavior in a wide set of analyses and alternatives. While much of this extant research controls for some of these elements of learning capacity, they fail to conceptualize how these elements can shape and define perspectives and approaches. Beyond the measures used herein to capture a state's learning capacity, this study demonstrates the importance of accounting for the conditioning effect of various elements that will influence decisions and decision-making procedures. It is important to conceptualize and integrate an understanding of the lens through which a state gathers, interprets, analyzes, and internalizes information.

In so doing, I am able to enhance the understanding of forum shopping at the international level. The argument – and related hypotheses – demonstrated that initial conditions are not the only factor driving state decisions when presented with multiple forums to resolve a particular issue or dispute. A state's repeated use of a body contributes to not only the ability to use that body and others in the future but also the likelihood of doing so. Further, these initial conditions are influenced by previous

interactions and efforts under similar conditions. This approach demonstrates the failings of previous research to help understand forum shopping – particularly in international trade disputes – which fail to look to the past to help understand these decisions and/or consider how a state's perspective of the past may alter the relative importance of various factors.

Beyond those mentioned, this study advances several additional strains of scholarly research. Primarily, this project contributes in a number of ways to the understandings of international trade dispute settlement and state learning. While existing research has provided extensive insight into what influences dispute initiation in international trade disputes at particular forums, much of this research has failed to properly contextualize these decisions. Specifically, this research has failed to capture the fact that a state is making a simultaneous decision to use one pathway to resolve an international trade dispute and to not use all of the other available alternatives. Such insight contributes to academic research beyond scholarly efforts to understand international trade disputes. Across a diverse set of issue areas and state goals, a state makes a decision while simultaneously choosing not to pursue other viable alternatives. The insight provided herein can thus be used to help understand why states make the choice to utilize one alternative instead of any other.

The understanding of the relative relationship of regional trade dispute settlement bodies also provides a new approach to understanding use of international organizations and regimes. The failure to properly contextualize the relationship yields an inability to understand that the dynamic inter-organizational effect of overlapping organizations, specifically the trade dispute settlement mechanisms inherent in international trade organizations. By properly considering and modeling the effects of organizations on each other, future research can better understand how using one international institution can influence a state's use of the other. Such an understanding of the complex interdependencies between similar international institutions can help provide insight into the divergence in the perceived or actual level of effectiveness of these institutions. Further, by examining and demonstrating the stumbling block role of the dispute settlement mechanisms, this study exhibits that particular facets of institutions – but not necessarily the institution as a whole – can inhibit or enhance other international institutions.

In terms of practical implications, a policy-maker might take these results to imply that his/her state should no longer pursue or participate in regional bodies, given the sunk costs associated with participation and membership in the World Trade Organization. This is based on the assumption that the regional dispute settlement body's status as a stumbling block is harmful or generates negative externalities. However, pursuing regional endeavors is not a wholly negative enterprise. This is particularly true in developing countries that face extensive limitations and challenges in use of formal dispute settlement mechanisms. The ability to learn and increase dispute resolution capacities through use of regional dispute settlement bodies provides a way to not only use international bodies to resolve trade disputes when constraints exist but also to potentially minimize these constraints. As has been well documented, developing countries have a relative disadvantage at the dispute resolution bodies. However, by learning through previous use of regional dispute settlement bodies, it is these types of states that see the greatest effect in terms of the enhancement of dispute resolution infrastructure. Learning-by-doing provides a potential avenue to narrow the gaps between developed and developing countries in formal trade dispute resolution mechanisms. This has additional practical applications because it provides an avenue for a state to increase its capacity through its own activities. Learning through experience thus provides an avenue for increasing litigation capacity and the ability to peacefully resolve trade disputes that does not involve extensive expansion of monetary and/or political contributions of certain institutions, member-states, and/or non-governmental elements, which may already be quite extensive.

The learning that occurs through dispute resolution endeavors can also generate a push to adapt the regime to respond to the unique challenges within the regional bloc – specifically in terms of both constraints faced by developing countries and the elements emphasized in trade liberalization or larger community-wide economic goals – while simultaneously providing an alternative that offers a legitimate, unbiased, and authoritative body to adjudicate disputes; this is observed with the development of the Mercosur over time. As discussed in earlier chapters, the Mercosur was adapted through various protocols, which yielded the present form of the dispute settlement mechanism that includes, among other things, a standing body to adjudicate disputes and compliance issues. It is not only the Mercosur that has

adapted over time to more closely resemble the dispute settlement mechanism of the WTO. The dispute resolution mechanism of the Central American Common Market very closely resembles the basic framework of the body at the WTO. Through repeated use of these institutions, the developing member states are not only enhancing their own dispute resolution capacity but also enhancing the institution itself to make it a closer substitute for dispute resolution at the WTO. Providing an alternative pathway where constraints and limitations are not only more limited relative to the WTO but also have the ability to be minimized through repeated use can allow for the development of a substitutable regional institution that is comparable to the WTO. Such a body can allow this group of states to develop a feasible outside option, which not only increases the dispute resolution ability of the regional organization but also increases the negotiating power of these states at the multilateral WTO. As a result, these regional bodies can potentially mitigate concerns about the challenges faced by and position of developing countries at the WTO.

## 6.4 Future Research

Although this study has provided extensive evidence regarding the relationship between previous regional dispute settlement experience and future regional dispute settlement body use, the argument and analyses generate a number of unanswered questions that can be pursued in future research. To further understand this relationship, future endeavors can engage in analyses to uncover and understand the learning mechanism theorized and demonstrated to be at play. One of the first extensions of this project involves a thorough look at the sources of information that can be used to enhance a state's dispute settlement infrastructure. My analyses have focused on the ability of states to learn from their own experiences. However, a state's own regional dispute settlement experience is not the only potential source of information. Partners in the regional trade organization engage in similar disputes and have a wide array of experiences that provides extensive information regarding the obligations as a member state of the organization and the manner in which the institution interprets the laws and rules of procedure. As information diffuses across borders and through interaction within and outside of the relevant

international institutions, a state can potentially learn from the experiences of others. Further empirical analysis can demonstrate the relative influence of different forms of information and the extent to which states learn from this information. Such analyses will provide greater insight into how use of a regional dispute settlement body contributes to further use of the regional alternative even though a dispute settlement mechanism exists at the WTO.

Additional empirical analyses can also provide greater insight into the mechanism at play between previous experience and future forum choice by unpacking and re-modeling the relationship. This includes expanding analyses to further understand the network of decisions and existing disputes. Particularly, this strain of future research focuses on looking at how states utilize the outcomes and/or rulings associated with a particular dispute in future dispute initiations and litigation strategies. By examining tariff levels to uncover potential trade disputes, future research can also understand the heterogeneity in disputes and the subsequent variations in learning. Gathering this information can also facilitate greater insight into the influence of learning on forum choice by increasing the feasibility of conducting more advanced analyses that capture the competing risks associated with using each dispute resolution alternative. Each of these extensions of my analyses will help to further solidify the confidence in the learning-by-doing mechanism.

The confidence in this mechanism can also be enhanced by expanding the forum shopping data set I have collected. The data set utilized in this study focuses on dispute resolution in trade organizations in the western hemisphere. Expanding the data set to include global use of the regional trade dispute settlement mechanisms will provide further evidence to support my expectations. The expansion of my data set will also provide the opportunity to add nuance to the findings regarding the conditional effect of learning. Particularly, expansion of the data set will increase the variety in terms of the measures of learning capacity, particularly the influence of the level of development. The only states in the current data set that are classified as "developed" are found within a single regional trade organization, i.e., the NAFTA. Expanding the data set to include other developed and developing countries will help confirm whether the effect of the level of development on learning, particularly the minimal effect for developed

countries, is truly a function of development level and not a function of membership in a particular regional institution. This will provide insight on the manner in which learning from previous experience is affected by the context under which learning occurs and the extent to which the circumstances surrounding learning and previous experience influences dispute initiation decisions.

Another avenue to expand upon the theoretical implications and empirical findings herein involves expanding the forum shopping data set to include data on potential disputes, which will provide more nuance to the understanding of dispute initiation patterns. Beyond the potential benefits of doing so described above – i.e., the ability to use alternative statistical methods to understand the relationship between previous experience, learning, and future regional dispute initiation – having a comprehensive list of potential disputes provides the ability to assess not only the choice of forum but also the timing of dispute initiation at particular forums. Detailed examination of previous use of the body can generate a greater understanding about how certain disputes influence certain segments of the population. For example, certain sectors of the economy may have lobbied for dispute resolution and been key players in developing the litigation strategy utilized by the state. Such activities imply not only a greater awareness of dispute resolution process but also a deeper understanding of it. As a result, a state may time a dispute with a high likelihood of success at a particular forum in order to maximize potential positive externalities, such as electoral benefits. However, another economic sector may be less involved in such litigation and dispute resolution endeavors, which could lead a state to time resolution at a multilateral alternative, which maximizes potential visibility of such endeavors, to realize these electoral benefits.

Similarly, the theoretical insights associated with "learning-by-doing" can be applied in future research to other sources of and forums for international disputes. The insights herein may be particularly applicable to disputes associated with intellectual property rights, investment, and environmental protection. I expect that these issue areas can effectively apply the arguments and insights provided by this study given the overlapping nature of such agreements and organizations and the absence of codified and/or well-established enforcement mechanisms. These forms of disputes provide unique challenges to both developing and developed countries. As a result, insight into dispute resolution experience at

international and regional forums in these issue areas can help to uncover the potentially beneficial effect of learning on capacity building and future use of that body.

Although this study leaves room for future analyses of the relationship between previous experience, learning, and future forum choice, it lays the basic framework to understand how states learn in regional trade dispute settlement bodies, how learning varies within these institutions, and how such endeavors influence future behavior. Given the pervasiveness of regional and overlapping trade institutions as well as the extensive use of such institutions as substitutes to the global, multilateral bodies at the WTO, such insight can help to understand the decisions made by states and the context that influences this decision. The emphasis on the conditioning effect of a state's capacity to learn in this study demonstrates the importance of understanding the context in order to accurately predict not only state choice but also the adaptation of these choices over time. Utilizing such an approach will help contribute to the understanding of an institution – and its component parts – in inhibiting or facilitating a move from the bilateral or regional level to the global level to resolve issues with wide ranging effects and consequences.

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# A.0 APPENDIX A: SUPPLEMENTAL TABLES

## A.1 CHAPTER 4 SUPPLEMENTAL TABLES

### A.1.1 EMPIRICAL RESULTS OF RE-ESTIMATION OF MODELS

**Table A.1.1: Parsimonious Models of Effect of Previous Experience on Forum Choice at Country-Year Level of Analysis**

| | Country-Year Model | | | Country-Year-Subject Model | | | Country-Year-Subject Conditional Model | | |
|---|---|---|---|---|---|---|---|---|---|
| | No Dispute | Regional Dispute | Both Forums | No Dispute | Regional Dispute | Both Forums | No Dispute | Regional Dispute | Both Forums |
| # Regional Disputes $_{i\,t-1}$ | -0.015 | 0.460 | 0.482 | -0.544*** | 0.516*** | 0.572*** | -0.039 | 0.78 | -0.738 |
| | (0.703) | (0.699) | (0.687) | (0.154) | (0.099) | (0.072) | (1.486) | (1.52) | (1.750) |
| # Regional Disputes $_{i\,t-1}$ X Ln GDP pc $_{it-1}$ | | | | | | | -0.058 | -0.029 | 0.151 |
| | | | | | | | (0.150) | (0.144) | (0.172) |
| # WTO Disputes $_{i\,t-1}$ | -0.489* | -0.512 | -0.397 | -1.136*** | -0.393 | 0.675*** | -1.13*** | -0.267 | 0.767** |
| | (0.303) | (0.710) | (0.549) | (0.234) | (0.368) | (0.213) | (0.201) | (0.35) | (0.342) |
| # Third Party | 0.201 | 0.123 | 0.178** | 0.026 | 0.047 | 0.051 | 0.025 | 0.047 | 0.037 |
| | (0.205) | (0.251) | (0.091) | (0.097) | (0.096) | (0.089) | (0.096) | (0.094) | (0.112) |
| Ln GDP pc $_{it-1}$ | 7.101** | 7.109** | 7.68** | -0.830** | -0.711** | -1.135** | -0.811** | -0.694** | -1.609 |
| | (3.386) | (3.396) | (3.87) | (0.396) | (0.396) | (0.559) | (0.382) | (0.417) | (0.823) |
| Ln Total Trade/ GDP $_{i\,t-1}$ | 0.839 | -0.756 | -1.83 | 0.412** | -0.018 | -0.378 | 0.407** | -0.026 | -0.370 |
| | (9.253) | (9.105) | (9.45) | (0.247) | (0.244) | (0.366) | (0.247) | (0.236) | (0.491) |
| Polity 2 $_{it-1}$ | -4.79* | -4.79* | -5.05* | 0.248 | 0.236 | 0.176 | 0.248 | 0.237 | 0.217 |
| | (3.24) | (3.24) | (3.51) | (0.199) | (0.203) | (0.207) | (0.201) | (0.206) | (0.216) |
| CAN | 35.25** | 34.98*** | 15.6* | 16.819*** | 17.99*** | -0.827 | 16.68*** | 17.84*** | -0.882 |
| | (10.22) | (9.61) | (10.3) | (0.665) | (0.671) | (0.723) | (0.64) | (0.66) | (0.882) |
| MERC | 27.64*** | 28.41*** | 25.15*** | 16.348*** | 17.87*** | 14.436*** | 16.59*** | 18.09*** | 14.69*** |
| | (1.39) | (1.60) | (0.94) | (0.801) | (0.877) | (1.283) | (0.82) | (0.86) | (1.24) |
| CACM | 35.53 | 34.56*** | 33.18*** | 16.076*** | 15.828*** | 13.699*** | 15.98*** | 15.71*** | 12.9*** |
| | (4.05) | (3.53) | (4.82) | (1.005) | (1.056) | (0.901) | (0.99) | (1.09) | (1.29) |
| constant | -26.15 | -19.87 | -18.91 | -237.96** | -103.686 | -101.45 | -237.4** | -104.2 | -66.23 |
| | (39.58) | (38.42) | (42.99) | (105.571) | (117.508) | (121.28) | (108.1) | (119.1) | (156.12) |
| | | | | | Year Effects Included | | | Year Effects Included | |
| N | | 251 | | | 2008 | | | 2008 | |
| Pseudo $R^2$ | | 0.431 | | | 0.333 | | | 0.335 | |
| Log Pseudolikelihood | | -139.146 | | | -724.762 | | | -722.836 | |

Robust standard errors in parentheses. P values are calculated for a one-tailed hypothesis test. Observations clustered by country. *p < 0.10, **p < 0.05, ***p < 0.01

**Table A.1.2: Parsimonious Models of Effect of Previous Experience on Forum Choice at Dyad-Year Level of Analysis**

| | | Reduced Model 1 | | | Reduced Model 2 | | | Reduced Model 3 | | | Reduced Model 4 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | No Dispute | Regional Dispute | Both Forums | No Dispute | Regional Dispute | Both Forums | No Dispute | Regional Dispute | Both Forums | No Dispute | Regional Dispute | Both Forums |
| # Regional Disputes $_{ijst-1}$ | 0.539 | 1.374*** | 1.355*** | 0.642 | 1.216*** | 1.195*** | | | | -6.441*** | -4.756*** | -1.772 |
| | (0.470) | (0.462) | (0.282) | (0.503) | (0.522) | (0.327) | | | | (1.829) | (1.766) | (1.438) |
| # Regional Disputes $_{ijt-1}$ | | | | | | | 0.133 | 0.184 | 0.202 | | | |
| | | | | | | | (0.194) | (0.203) | (0.208) | | | |
| # Regional Disputes $_{ijst-1}$ X Ln GDP pc $_{it-1}$ | | | | | | | | | | 0.734*** | 0.608*** | 0.253* |
| | | | | | | | | | | (0.227) | (0.226) | (0.185) |
| # WTO Disputes $_{ijst-1}$ | -1.150** | -1.733*** | -37.23*** | -1.110** | -1.491*** | -20.1*** | | | | -1.340*** | -1.594*** | -19.79*** |
| | (0.496) | (0.354) | (0.729) | (0.581) | (0.414) | (0.867) | | | | (0.555) | (0.403) | (0.704) |
| # WTO Disputes $_{ijt-1}$ | | | | | | | -0.490*** | -0.561*** | -2.16*** | | | |
| | | | | | | | (0.147) | (0.195) | (0.755) | | | |
| # Third Party | -0.0546 | -0.0884** | -0.0304 | -0.0411 | -0.0794** | -0.0483 | -0.0378 | -0.0707* | -0.0147 | -0.0434 | -0.0834** | -0.0314 |
| | (0.0430) | (0.0398) | (0.0874) | (0.0379) | (0.0383) | (0.119) | (0.0474) | (0.0432) | (0.128) | (0.0381) | (0.0392) | (0.112) |
| Ln GDP pc $_{it-1}$ | | | | -0.376* | -0.395* | 0.0465 | -0.355* | -0.345* | 0.156 | -0.434* | -0.419* | 0.192 |
| | | | | (0.266) | (0.263) | (0.233) | (0.262) | (0.262) | (0.315) | (0.267) | (0.264) | (0.255) |
| Ln GDP pc $_{jt-1}$ | | | | -0.538* | -0.147 | -0.0967 | -0.477 | -0.133 | -0.0121 | -0.508* | -0.115 | -0.232 |
| | | | | (0.377) | (0.367) | (0.263) | (0.394) | (0.381) | (0.296) | (0.394) | (0.383) | (0.282) |
| RTA Dispute $_{ijst-1}$ | | | | -1.433*** | 0.441 | 2.015*** | -1.575*** | 0.562* | 2.103*** | -1.445*** | 0.399 | 2.267*** |
| | | | | (0.462) | (0.428) | (0.702) | (0.423) | (0.378) | (0.548) | (0.442) | (0.417) | (0.636) |
| WTO Dispute $_{ijst-1}$ | | | | -2.592*** | -1.349 | 0.982* | -2.552*** | -1.376 | 0.898* | -2.680*** | -1.465 | 1.004* |
| | | | | (0.710) | (1.226) | (0.690) | (0.725) | (1.279) | (0.697) | (0.688) | (1.225) | (0.649) |
| Both Dispute $_{ijst-1}$ | | | | -3.007*** | 0.966 | 1.981 | -2.822*** | 1.144 | 2.151 | -2.956*** | 0.928 | 1.802 |
| | | | | (0.715) | (1.289) | (1.567) | (0.722) | (1.322) | (1.837) | (0.709) | (1.286) | (1.654) |
| CAN | 16.35*** | 16.45*** | -0.124 | 16.36*** | 17.33*** | -0.0721 | 15.47*** | 16.37*** | 0.0660 | 15.75*** | 16.70*** | -0.730 |
| | (0.493) | (0.364) | (0.296) | (1.566) | (1.500) | (1.038) | (1.386) | (1.224) | (0.967) | (1.446) | (1.309) | (1.014) |
| MERC | 3.020*** | 3.872*** | 0.523 | 1.712* | 2.966*** | -0.0390 | 1.615* | 2.779*** | -0.370 | 1.915* | 3.145*** | -0.216 |
| | (1.026) | (0.945) | (0.806) | (1.317) | (1.249) | (1.079) | (1.222) | (1.107) | (0.959) | (1.283) | (1.214) | (1.047) |
| CACM | 3.714*** | 1.606* | -12.74*** | 1.353 | 0.398 | -14.1*** | 1.481 | 0.437 | -13.0*** | 1.293 | 0.343 | -13.85*** |
| | (1.079) | (1.104) | (1.071) | (1.393) | (1.242) | (0.872) | (1.408) | (1.242) | (0.778) | (1.408) | (1.240) | (0.862) |
| constant | 4.102*** | 1.395*** | -0.211 | 13.35** | 6.651 | -0.558 | 12.61** | 6.124 | -2.237 | 13.65** | 6.670 | -0.567 |
| | (0.453) | (0.241) | (0.406) | (5.749) | (5.565) | (3.648) | (5.768) | (5.568) | (4.781) | (5.901) | (5.690) | (4.186) |
| N | | 6704 | | | 6704 | | | 6704 | | | 6704 | |
| Pseudo $R^2$ | | 0.194 | | | 0.276 | | | 0.261 | | | 0.278 | |
| Log Pseudolikelihood | | -1587.39 | | | -1426.63 | | | -1455.36 | | | -1422.04 | |

Robust standard errors in parentheses. P values are calculated for a one-tailed hypothesis test. Observations clustered by dyad. *p < 0.10, **p < 0.05, ***p < 0.01

**Table A.1.3: Influence of Previous Dyadic Regional Dispute Experience Across Subject Areas on Trade Dispute Forum Choice**

| | Model A4 | | | Model A5 | | | Model A6 | | |
|---|---|---|---|---|---|---|---|---|---|
| | No Dispute | Regional Dispute | Both Forums | No Dispute | Regional Dispute | Both Forums | No Dispute | Regional Dispute | Both Forums |
| # Regional Disputes $_{ijt-1}$ | 0.209 | 0.249 | 0.164 | -0.034 | -0.004 | -0.187 | 0.456 | 0.507* | 0.488* |
| | (0.282) | (0.272) | (0.256) | (0.961) | (1.047) | (0.909) | (0.359) | (0.372) | (0.368) |
| # Regional Disputes $_{(ijt-1)}$ X Sector Exports $_{ij\ t-1}$/ Total Exports $_{ij\ t-1}$ | -0.054 | -0.058* | -0.088** | | | | | | |
| | (0.045) | (0.041) | (0.042) | | | | | | |
| # Regional Disputes $_{(ijt-1)}$ X Sector Exports $_{ij\ t-1}$/ GDP $_{j\ t-1}$ | | | | -0.029 | -0.031 | -0.043 | | | |
| | | | | (0.08) | (0.087) | (0.079) | | | |
| # Regional Disputes $_{ijt-1}$ X Power $_{iit-1}$ | | | | | | | 0.118 | 0.117 | 0.105 |
| | | | | | | | (0.153) | (0.158) | (0.149) |
| # WTO Disputes $_{ijt-1}$ | -0.623** | -0.807*** | -2.291** | -0.614** | -0.798*** | -2.280** | -0.625** | -0.811*** | -2.276** |
| | (0.286) | (0.28) | (1.044) | (0.279) | (0.279) | (1.035) | (0.286) | (0.293) | (1.033) |
| # Third Party | -0.0006 | -0.05 | -0.016 | -0.002 | -0.052 | -0.017 | -0.01 | -0.06 | -0.027 |
| | (0.069) | (0.069) | (0.142) | (0.069) | (0.068) | (0.141) | (0.081) | (0.079) | (0.151) |
| Power | 0.702 | 0.62 | 1.968*** | 0.709 | 0.626 | 1.975*** | 0.496 | 0.417 | 1.823*** |
| | (0.782) | (0.773) | (0.646) | (0.779) | (0.765) | (0.647) | (0.685) | (0.679) | (0.471) |
| Ln GDP pc $_{it-1}$ | -1.599* | -1.735** | -2.525** | -1.637* | -1.772** | -2.548** | -1.676* | -1.816** | -2.645** |
| | (1.032) | (1.034) | (1.491) | (1.047) | (1.039) | (1.51) | (1.079) | (1.075) | (1.513) |
| Ln GDP pc $_{jt-1}$ | -1.853*** | -1.573*** | -1.862*** | -1.843*** | -1.563*** | -1.877*** | -1.909*** | -1.627*** | -1.895*** |
| | (0.5) | (0.495) | (0.632) | (0.502) | (0.497) | (0.637) | (0.502) | (0.492) | (0.622) |
| Ln Sector Exports $_{ij\ t-1}$/ GDP $_{i\ t-1}$ | -0.987*** | -0.817** | 0.349 | -0.985*** | -0.814** | 0.369 | -1.069*** | -0.900** | 0.287 |
| | (0.356) | (0.368) | (0.394) | (0.364) | (0.372) | (0.395) | (0.457) | (0.469) | (0.501) |
| Ln Total Trade/ GDP $_{i\ t-1}$ | 4.581** | 3.651* | 3.905** | 4.622** | 3.697* | 4.002** | 4.577** | 3.652* | 3.966** |
| | (2.465) | (2.503) | (2.011) | (2.468) | (2.513) | (2.089) | (2.38) | (2.435) | (2.013) |
| Sector Exports $_{ij\ t-1}$/ Total Exports $_{ij\ t-1}$ | 1.519*** | 1.878*** | 0.680** | 1.488*** | 1.841*** | 0.56 | 1.546*** | 1.898*** | 0.573 |
| | (0.423) | (0.454) | (0.41) | (0.437) | (0.47) | (0.482) | (0.51) | (0.54) | (0.577) |
| Polity 2 $_{it-1}$ | 0.4799* | 0.419 | 0.950* | 0.488* | 0.427* | 0.959* | 0.522* | 0.460* | 1.003* |
| | (0.339) | (0.329) | (0.637) | (0.339) | (0.328) | (0.637) | (0.348) | (0.34) | (0.619) |
| Polity 2 $_{jt-1}$ | 0.946*** | 0.983*** | 0.688*** | 0.954*** | 0.990*** | 0.712*** | 0.979*** | 1.015*** | 0.716*** |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | (0.1696) | (0.17) | (0.171) | (0.176) | (0.178) | (0.178) | (0.165) | (0.168) | (0.154) |
| RTA Dispute $_{ijst-1}$ | -1.979*** | -0.505 | 0.908*** | -1.980*** | -0.508 | 0.890** | -1.977*** | -0.507 | 0.880** |
| | (0.426) | (0.443) | (0.389) | (0.424) | (0.449) | (0.404) | (0.408) | (0.435) | (0.425) |
| WTO Dispute $_{ijst-1}$ | -2.042*** | -0.661 | 1.388** | -2.063*** | -0.683 | 1.296** | -2.174*** | -0.791 | 1.191* |
| | (0.644) | (1.363) | (0.738) | (0.736) | (1.403) | (0.747) | (0.752) | (1.378) | (0.814) |
| Both Dispute $_{ijst-1}$ | -3.416*** | -0.106 | 0.624 | -3.418*** | -0.107 | 0.625 | -3.440*** | -0.121 | 0.633 |
| | (0.796) | (1.416) | (1.857) | (0.757) | (1.378) | (1.802) | (0.765) | (1.386) | (1.831) |
| CAN | 13.465*** | 14.041*** | -4.271** | 13.649*** | 14.228*** | -4.356** | 13.030*** | 13.602*** | -4.671** |
| | (1.834) | (1.843) | (2.166) | (1.788) | (1.84) | (2.113) | (1.888) | (1.895) | (2.207) |
| MERC | -1.486* | -0.772 | -3.873** | -1.528* | -0.816 | -3.907** | -1.572** | -0.865 | -3.997** |
| | (0.957) | (1.046) | (1.702) | (0.963) | (1.034) | (1.737) | (0.92) | (0.988) | (1.726) |
| CACM | 7.379** | 6.519* | -11.11*** | 7.603** | 6.746** | -11.20*** | 7.125** | 6.260* | -11.38*** |
| | (3.963) | (4.031) | (3.91) | (3.977) | (4.018) | (3.937) | (3.971) | (4.016) | (3.906) |
| constant | 0.781 | 3.459 | 22.289** | 0.717 | 3.375 | 22.009** | 0.225 | 2.883 | 21.690* |
| | (10.922) | (10.651) | (12.855) | (11.27) | (10.892) | (12.91) | (11.739) | (11.542) | (13.949) |
| N | | 3661 | | | 3661 | | | 3661 | |
| Pseudo $R^2$ | | 0.302 | | | 0.302 | | | 0.302 | |
| Log Pseudolikelihood | | -962.686 | | | -962.998 | | | -962.918 | |

Robust standard errors in parentheses. P values are calculated for a one-tailed hypothesis test. Observations clustered by dyad. *p < 0.10, **p < 0.05, ***p < 0.01

**Table A.1.4: Effect of Previous Dyadic Regional Dispute Experience in Same Subject Areas and Forum Choice, Estimated with Dispute Cubic Polynomials**

| | Model 1b | | | Model 3b | | |
|---|---|---|---|---|---|---|
| | Regional Dispute | WTO Dispute | Both Forums | Regional Dispute | WTO Dispute | Both Forums |
| # Regional Disputes $_{ijst-1}$ | 0.339*** | -0.909* | 0.268 | 1.370*** | 7.055*** | 4.713*** |
| | (0.0707) | (0.631) | (0.284) | (0.574) | (2.807) | (0.936) |
| # Regional Disputes $_{ijst-1}$ X Ln GDP pc $_{it-1}$ | | | | -0.117** | -0.834*** | -0.522*** |
| | | | | (0.0640) | (0.337) | (0.113) |
| # WTO Disputes $_{ijst-1}$ | -0.485 | 1.529** | -33.37*** | -0.373 | 1.919** | -35.44*** |
| | (0.571) | (0.860) | (0.604) | (0.613) | (0.893) | (0.580) |
| # Third Party | -0.0517** | -0.00154 | -0.0381 | -0.0529** | -0.0106 | -0.0284 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | (0.0312) | (0.0673) | (0.0636) | (0.0311) | (0.0748) | (0.0608) |
| Power | -0.0534 | -0.488 | 1.093** | -0.0581 | -0.732 | 1.125** |
| | (0.0908) | (1.013) | (0.526) | (0.0909) | (1.034) | (0.603) |
| Ln GDP pc $_{it-1}$ | -0.171 | 1.370* | -0.914* | -0.125 | 1.665** | -0.796 |
| | (0.152) | (0.981) | (0.685) | (0.157) | (1.001) | (0.809) |
| Ln GDP pc $_{jt-1}$ | 0.293*** | 2.363*** | -0.0377 | 0.292*** | 2.202*** | -0.171 |
| | (0.119) | (0.591) | (0.293) | (0.120) | (0.575) | (0.314) |
| Ln Sector Exports $_{ij\ t-1}$/ GDP $_{i\ t-1}$ | 0.157** | 0.491* | 1.311*** | 0.153** | 0.395 | 1.267*** |
| | (0.0705) | (0.335) | (0.282) | (0.0703) | (0.329) | (0.313) |
| Ln Total Trade/ GDP $_{i\ t-1}$ | -0.915*** | -3.084** | -0.753 | -0.920*** | -3.324** | -0.698 |
| | (0.190) | (1.776) | (1.284) | (0.185) | (1.775) | (1.231) |
| Sector Exports $_{ij\ t-1}$/ Total Exports $_{ij\ t-1}$ | 0.340*** | -0.850*** | -1.016*** | 0.344*** | -0.731** | -0.854*** |
| | (0.100) | (0.335) | (0.398) | (0.100) | (0.329) | (0.361) |
| Polity 2 $_{it-1}$ | -0.0871* | -0.427* | 0.497 | -0.0890** | -0.455** | 0.488 |
| | (0.0539) | (0.275) | (0.400) | (0.0537) | (0.270) | (0.468) |
| Polity 2 $_{jt-1}$ | 0.0228 | -0.887*** | -0.335*** | 0.0226 | -0.819*** | -0.373*** |
| | (0.0397) | (0.158) | (0.136) | (0.0399) | (0.160) | (0.154) |
| RTA Dispute $_{ijst-1}$ | 1.259*** | 1.364** | 3.025*** | 1.237*** | 1.333** | 3.264*** |
| | (0.234) | (0.605) | (0.571) | (0.234) | (0.619) | (0.592) |
| WTO Dispute $_{ijst-1}$ | 1.357** | 1.964*** | 3.704*** | 1.345** | 2.110*** | 3.996*** |
| | (0.753) | (0.753) | (0.680) | (0.762) | (0.734) | (0.656) |
| Both Dispute $_{ijst-1}$ | 3.341*** | 3.637*** | 4.497*** | 3.231*** | 3.577*** | 4.289*** |
| | (0.766) | (0.621) | (1.290) | (0.781) | (0.628) | (1.330) |
| CAN | 0.544* | -27.58*** | -32.12*** | 0.509 | -29.97*** | -36.04*** |
| | (0.402) | (1.610) | (0.945) | (0.401) | (1.576) | (1.232) |
| MERC | 0.767** | 0.806 | -2.233** | 0.732** | 0.502 | -2.876*** |
| | (0.339) | (0.716) | (1.026) | (0.337) | (0.687) | (1.207) |
| CACM | -1.189** | -23.81*** | -21.06*** | -1.201** | -25.57*** | -25.79*** |
| | (0.630) | (3.941) | (1.364) | (0.639) | (3.964) | (1.482) |
| Dispute Years | -0.332*** | -30.35*** | -44.03*** | -0.333*** | -34.06*** | -43.79*** |
| | (0.115) | (0.782) | (2.900) | (0.116) | (0.737) | (2.932) |
| Dispute Years$^2$ | 0.0347*** | 3.019*** | 41.37*** | 0.0353*** | 3.357*** | 41.20*** |
| | (0.0137) | (0.0719) | (2.798) | (0.0138) | (0.0668) | (2.907) |
| Dispute Years$^3$ | -0.0009** | -0.075*** | -9.401*** | -0.0009** | -0.082*** | -9.351*** |

| | | | | | | |
|---|---|---|---|---|---|---|
| | (0.0004) | (0.002) | (0.648) | (0.0004) | (0.002) | (0.681) |
| constant | 3.060* | -14.12* | 21.06*** | 2.703 | -16.10* | 21.40*** |
| | (2.361) | (10.64) | (8.467) | (2.327) | (10.55) | (7.231) |
| N | | 3661 | | | 3661 | |
| Pseudo $R^2$ | | 0.311 | | | 0.314 | |
| Log Pseudolikelihood | | -950.648 | | | -946.273 | |

Robust standard errors in parentheses. P values are calculated for a one-tailed hypothesis test. Observations clustered by dyad. *p < 0.10, **p < 0.05, ***p < 0.01

**Table A.1.5: Conditional Effect of Previous Dyadic Regional Dispute Experience in Same Subject Areas and Forum Choice , Estimated with Dispute Cubic Polynomials**

| | Model 4b | | | Model 5b | | | Model 6b | | |
|---|---|---|---|---|---|---|---|---|---|
| | Regional Dispute | WTO Dispute | Both Forums | Regional Dispute | WTO Dispute | Both Forums | Regional Dispute | WTO Dispute | Both Forums |
| # Regional Disputes $_{ijst-1}$ | 0.316*** | -2.115* | -1.404*** | 0.374 | 0.0903 | -3.055* | 0.311*** | -1.358 | 0.222 |
| | (0.101) | (1.504) | (0.372) | (0.532) | (5.548) | (1.967) | (0.0975) | (1.118) | (0.362) |
| # Regional Disputes $_{ijst-1}$ X Sector Exports $_{ij\ t-1}$/ Total Exports $_{ij\ s\ t-1}$ | -0.0184 | -0.527* | -0.734*** | | | | | | |
| | (0.0651) | (0.381) | (0.176) | | | | | | |
| # Regional Disputes $_{ijst-1}$ X Sector Exports $_{ij\ t-1}$/ GDP $_{i\ t-1}$ | | | | 0.00186 | 0.0797 | -0.240** | | | |
| | | | | (0.0423) | (0.482) | (0.139) | | | |
| # Regional Disputes $_{ijst-1}$ X Power $_{ijt-1}$ | | | | | | | -0.0254 | -0.494 | -0.0609 |
| | | | | | | | (0.0592) | (0.462) | (0.126) |
| # WTO Disputes $_{ijst-1}$ | -0.488 | 1.671** | -30.78*** | -0.490 | 1.523** | -37.23*** | -0.476 | 1.713* | -36.51*** |
| | (0.552) | (0.982) | (0.704) | (0.563) | (0.853) | (0.597) | (0.566) | (1.058) | (0.619) |
| # Third Party | -0.0523** | 0.00569 | -0.0522 | -0.0519** | -0.00242 | -0.0473 | -0.0515* | 0.000630 | -0.0361 |
| | (0.0309) | (0.0712) | (0.0670) | (0.0314) | (0.0675) | (0.0675) | (0.0314) | (0.0697) | (0.0624) |
| Power | -0.0525 | -0.611 | 0.997** | -0.0520 | -0.477 | 1.006** | -0.0427 | -0.430 | 1.155*** |
| | (0.0910) | (1.056) | (0.565) | (0.0891) | (0.979) | (0.534) | (0.0902) | (1.058) | (0.450) |
| Ln GDP pc $_{it-1}$ | -0.172 | 1.436* | -1.023 | -0.173 | 1.375* | -0.878 | -0.176 | 1.498* | -0.923* |
| | (0.152) | (1.000) | (0.951) | (0.152) | (0.984) | (0.799) | (0.153) | (1.014) | (0.681) |
| Ln GDP pc $_{jt-1}$ | 0.295*** | 2.279*** | -0.179 | 0.295*** | 2.363*** | -0.177 | 0.293*** | 2.396*** | -0.0242 |
| | (0.118) | (0.584) | (0.294) | (0.119) | (0.588) | (0.254) | (0.119) | (0.578) | (0.312) |
| Ln Sector Exports $_{ij\ t-1}$/ GDP $_{i\ t-1}$ | 0.157** | 0.441* | 1.188*** | 0.155** | 0.497* | 1.330*** | 0.158** | 0.520* | 1.331*** |
| | (0.0705) | (0.337) | (0.300) | (0.0717) | (0.336) | (0.312) | (0.0707) | (0.354) | (0.283) |
| Ln Total Trade/ GDP $_{i\ t-1}$ | -0.911*** | -3.197** | -0.952 | -0.908*** | -3.088** | -1.000 | -0.916*** | -3.141** | -0.731 |
| | (0.186) | (1.820) | (1.269) | (0.187) | (1.735) | (1.222) | (0.190) | (1.804) | (1.235) |
| Sector Exports $_{ij\ t-1}$/ Total Exports $_{ij\ t-1}$ | 0.343*** | -0.720** | -0.542** | 0.340*** | -0.858*** | -0.927*** | 0.339*** | -0.869*** | -1.028*** |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | (0.107) | (0.322) | (0.320) | (0.100) | (0.336) | (0.356) | (0.101) | (0.353) | (0.402) |
| Polity 2 $_{it-1}$ | -0.0866* | -0.427* | 0.554 | -0.0873* | -0.427* | 0.495 | -0.0871* | -0.467** | 0.490 |
| | (0.0543) | (0.271) | (0.584) | (0.0538) | (0.276) | (0.462) | (0.0538) | (0.258) | (0.388) |
| Polity 2 $_{it-1}$ | 0.0242 | -0.852*** | -0.362*** | 0.0230 | -0.891*** | -0.288*** | 0.0226 | -0.899*** | -0.344** |
| | (0.0397) | (0.156) | (0.131) | (0.0396) | (0.162) | (0.108) | (0.0392) | (0.152) | (0.152) |
| RTA Dispute $_{ijst-1}$ | 1.255*** | 1.390*** | 3.549*** | 1.254*** | 1.381** | 3.141*** | 1.261*** | 1.384** | 3.032*** |
| | (0.234) | (0.590) | (0.654) | (0.235) | (0.594) | (0.555) | (0.234) | (0.609) | (0.566) |
| WTO Dispute $_{ijst-1}$ | 1.353** | 1.928*** | 4.037*** | 1.357** | 1.982*** | 3.748*** | 1.357** | 2.055*** | 3.716*** |
| | (0.763) | (0.773) | (0.932) | (0.756) | (0.817) | (0.693) | (0.754) | (0.828) | (0.681) |
| Both Dispute $_{ijst-1}$ | 3.339*** | 3.605*** | 4.712*** | 3.338*** | 3.628*** | 4.490*** | 3.339*** | 3.635*** | 4.489*** |
| | (0.774) | (0.630) | (1.335) | (0.772) | (0.619) | (1.301) | (0.767) | (0.612) | (1.306) |
| CAN | 0.555* | -24.70*** | -30.38*** | 0.550* | -31.64*** | -36.50*** | 0.529* | -30.53*** | -35.41*** |
| | (0.400) | (1.572) | (1.389) | (0.399) | (1.547) | (1.058) | (0.399) | (1.713) | (0.939) |
| MERC | 0.774** | 0.661 | -3.328** | 0.772** | 0.824 | -2.490** | 0.756** | 0.995* | -2.257** |
| | (0.340) | (0.658) | (1.645) | (0.338) | (0.706) | (1.137) | (0.340) | (0.697) | (1.024) |
| CACM | -1.182** | -21.11*** | -26.32*** | -1.185** | -27.89*** | -22.94*** | -1.211** | -26.59*** | -23.47*** |
| | (0.629) | (3.869) | (1.718) | (0.629) | (3.897) | (1.403) | (0.629) | (3.931) | (1.347) |
| Dispute Years | -0.331*** | -27.20*** | -41.45*** | -0.332*** | -35.09*** | -45.34*** | -0.333*** | -34.24*** | -43.98*** |
| | (0.116) | (0.753) | (2.940) | (0.115) | (0.788) | (2.992) | (0.115) | (0.789) | (2.980) |
| Dispute Years$^2$ | 0.0347*** | 2.725*** | 39.29*** | 0.0348*** | 3.478*** | 42.66*** | 0.0349*** | 3.400*** | 41.32*** |
| | (0.0137) | (0.0702) | (2.898) | (0.0137) | (0.0716) | (2.933) | (0.0136) | (0.0722) | (2.895) |
| Dispute Years$^3$ | -0.0008** | -0.068*** | -8.940*** | -0.000849** | -0.0858*** | -9.696*** | -0.000851** | -0.0840*** | -9.387*** |
| | (0.0004) | (0.002) | (0.681) | (0.000393) | (0.00173) | (0.685) | (0.000392) | (0.00174) | (0.668) |
| Constant | 3.029* | -14.36* | 23.22*** | 3.007 | -14.04* | 23.00*** | 3.148* | -14.71* | 21.36*** |
| | (2.351) | (10.66) | (7.607) | (2.362) | (10.62) | (7.668) | (2.382) | (10.61) | (8.763) |
| N | | 3661 | | | 3661 | | | 3661 | |
| Pseudo $R^2$ | | 0.314 | | | 0.312 | | | 0.312 | |
| Log Pseudolikelihood | | -946.601 | | | -949.336 | | | -950.065 | |

Robust standard errors in parentheses. P values are calculated for a one-tailed hypothesis test. Observations clustered by dyad. *p < 0.10, **p < 0.05, ***p < 0.01

**Table A.1.6: Influence of Previous Dyadic Regional Dispute Experience in Same Subject Areas on Trade Dispute Forum Choice, Estimated with Regional Dispute Cubic Polynomials**

| | Model 1c | | | Model 3c | | |
|---|---|---|---|---|---|---|
| | Regional Dispute | WTO Dispute | Both Forums | Regional Dispute | WTO Dispute | Both Forums |
| # Regional Disputes $_{ijst-1}$ | 0.351*** | -0.602 | 0.267 | 1.368*** | 6.584* | 5.416*** |
| | (0.0724) | (0.612) | (0.294) | (0.551) | (4.156) | (1.283) |
| # Regional Disputes $_{ijst-1}$ X Ln (GDP pc) $_{it-1}$ | | | | -0.116** | -0.777* | -0.607*** |
| | | | | (0.0614) | (0.500) | (0.155) |
| # WTO Disputes $_{ijst-1}$ | -0.452 | 1.441** | -26.49*** | -0.347 | 1.790** | -22.11*** |
| | (0.564) | (0.804) | (0.590) | (0.616) | (0.989) | (0.593) |

| | | | | | | |
|---|---|---|---|---|---|---|
| # Third Party | -0.0594** | -0.0138 | -0.0512 | -0.0604** | -0.0278 | -0.0515 |
| | (0.0302) | (0.0922) | (0.0973) | (0.0302) | (0.0994) | (0.113) |
| Power | -0.0543 | -0.490 | 1.559*** | -0.0597 | -0.693 | 1.612** |
| | (0.0863) | (1.139) | (0.586) | (0.0867) | (1.199) | (0.733) |
| Ln GDP pc $_{it-1}$ | -0.177 | 1.569* | -1.520** | -0.131 | 1.761* | -1.417* |
| | (0.148) | (0.983) | (0.756) | (0.152) | (1.072) | (0.895) |
| Ln GDP pc $_{jt-1}$ | 0.284*** | 2.863*** | -0.313 | 0.283*** | 2.515*** | -0.827*** |
| | (0.118) | (0.613) | (0.308) | (0.119) | (0.579) | (0.322) |
| Ln Sector Exports $_{ij\ t-1}$/ GDP $_{i\ t-1}$ | 0.146** | 0.447 | 1.742*** | 0.142** | 0.384 | 1.779*** |
| | (0.0663) | (0.367) | (0.280) | (0.0662) | (0.375) | (0.304) |
| Ln Total Trade/ GDP $_{i\ t-1}$ | -0.901*** | -3.290* | -0.637 | -0.907*** | -3.451* | -0.698 |
| | (0.181) | (2.121) | (1.461) | (0.176) | (2.162) | (1.438) |
| Sector Exports $_{ij\ t-1}$/ Total Exports $_{ij\ t-1}$ | 0.361*** | -0.760** | -1.287*** | 0.365*** | -0.671** | -1.175*** |
| | (0.0961) | (0.374) | (0.363) | (0.0961) | (0.379) | (0.382) |
| Polity 2 $_{it-1}$ | -0.0797* | -0.416* | 0.776** | -0.0814** | -0.412* | 0.774** |
| | (0.0487) | (0.296) | (0.385) | (0.0485) | (0.316) | (0.438) |
| Polity 2 $_{jt-1}$ | 0.0218 | -0.974*** | -0.377*** | 0.0214 | -0.874*** | -0.280* |
| | (0.0409) | (0.196) | (0.160) | (0.0412) | (0.181) | (0.173) |
| RTA Dispute $_{ijst-1}$ | 1.288*** | 1.299** | 3.152*** | 1.265*** | 1.301** | 3.536*** |
| | (0.224) | (0.728) | (0.668) | (0.224) | (0.767) | (0.777) |
| WTO Dispute $_{ijst-1}$ | 1.446** | 2.406** | 4.330*** | 1.425** | 2.523** | 4.847*** |
| | (0.762) | (1.198) | (0.974) | (0.782) | (1.218) | (1.039) |
| Both Dispute $_{ijst-1}$ | 3.379*** | 3.910*** | 4.882*** | 3.266*** | 3.798*** | 4.711*** |
| | (0.799) | (0.795) | (1.639) | (0.812) | (0.830) | (1.709) |
| CAN | 0.479 | -20.15*** | -23.80*** | 0.444 | -15.89*** | -22.07*** |
| | (0.402) | (1.780) | (1.124) | (0.401) | (1.948) | (1.390) |
| MERC | 0.651** | 1.051** | -3.359*** | 0.615** | 0.535 | -4.444*** |
| | (0.340) | (0.593) | (1.141) | (0.338) | (0.566) | (1.286) |
| CACM | -1.029** | -12.52*** | -23.17*** | -1.030** | -8.418** | -20.90*** |
| | (0.550) | (4.081) | (1.596) | (0.558) | (4.485) | (1.768) |
| Regional Dispute Years | -0.270*** | 7.385*** | -3.682** | -0.273*** | 5.095*** | -3.894** |
| | (0.0748) | (0.832) | (2.184) | (0.0758) | (0.901) | (2.254) |
| Regional Dispute Years2 | 0.0241*** | -8.648*** | 1.600* | 0.0246*** | -6.267*** | 1.704* |
| | (0.00897) | (0.476) | (1.082) | (0.00911) | (0.408) | (1.063) |

| | | | | | | |
|---|---|---|---|---|---|---|
| Regional Dispute Years3 | -0.00054** | 0.322*** | -0.167* | -0.00055** | 0.234*** | -0.178* |
| | (0.00027) | (0.0175) | (0.127) | (0.00027) | (0.0147) | (0.123) |
| constant | 3.186* | -19.39** | 33.26*** | 2.830 | -18.94** | 37.56*** |
| | (2.385) | (9.249) | (9.768) | (2.349) | (9.587) | (8.210) |
| N | | 3661 | | | 3661 | |
| Pseudo R2 | | 0.316 | | | 0.319 | |
| Log Pseudolikelihood | | -944.231 | | | -939.955 | |

Robust standard errors in parentheses. P values are calculated for a one-tailed hypothesis test. Observations clustered by dyad. *p < 0.10, **p < 0.05, ***p < 0.01

**Table A.1.7: Conditional Influence of Previous Dyadic Regional Dispute Experience in Same Subject Areas on Trade Dispute Forum Choice, Estimated with Regional Dispute Cubic Polynomials**

| | Model 4c | | | Model 5c | | | Model 6c | | |
|---|---|---|---|---|---|---|---|---|---|
| | Regional Dispute | WTO Dispute | Both Forums | Regional Dispute | WTO Dispute | Both Forums | Regional Dispute | WTO Dispute | Both Forums |
| # Regional Disputes $_{ijst-1}$ | 0.324*** | -1.795 | -1.423*** | 0.333 | 1.068 | -3.441 | 0.328*** | -1.117 | 0.187 |
| | (0.103) | (1.904) | (0.350) | (0.544) | (4.614) | (2.975) | (0.101) | (1.325) | (0.396) |
| # Regional Disputes $_{(ijst-1)}$ X Sector Exports $_{ij\ t-1}$/ Total Exports $_{i\ t-1}$ | -0.0196 | -0.460 | -0.74*** | | | | | | |
| | (0.0667) | (0.479) | (0.167) | | | | | | |
| # Regional Disputes $_{(ijst-1)}$ X Sector Exports $_{ij\ t-1}$/ GDP $_{i\ t-1}$ | | | | -0.00211 | 0.132 | -0.267 | | | |
| | | | | (0.0432) | (0.396) | (0.209) | | | |
| # Regional Disputes $_{ijst-1}$ X Power $_{ijt-1}$ | | | | | | | -0.0198 | -0.421 | -0.126 |
| | | | | | | | (0.0573) | (0.519) | (0.137) |
| # WTO Disputes $_{ijst-1}$ | -0.453 | 1.527* | -23.9*** | -0.453 | 1.447** | -25.4*** | -0.445 | 1.564* | -22.9*** |
| | (0.552) | (1.037) | (0.694) | (0.553) | (0.824) | (0.582) | (0.563) | (1.034) | (0.619) |
| # Third Party | -0.0598** | -0.00989 | -0.0653 | -0.0597** | -0.0125 | -0.0649 | -0.0593** | -0.0124 | -0.0492 |
| | (0.0300) | (0.0924) | (0.114) | (0.0305) | (0.0898) | (0.118) | (0.0304) | (0.0907) | (0.0970) |
| Power | -0.0543 | -0.565 | 1.415** | -0.0539 | -0.476 | 1.444*** | -0.0461 | -0.400 | 1.735*** |
| | (0.0866) | (1.176) | (0.636) | (0.0847) | (1.112) | (0.602) | (0.0859) | (1.178) | (0.526) |
| Ln GDP pc $_{it-1}$ | -0.178 | 1.557* | -1.565* | -0.179 | 1.585* | -1.427** | -0.181 | 1.611* | -1.558** |
| | (0.147) | (1.026) | (0.955) | (0.147) | (0.985) | (0.842) | (0.149) | (1.025) | (0.762) |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Ln GDP pc $_{jt-1}$ | 0.285*** | 2.662*** | -0.670** | 0.286*** | 2.883*** | -0.572** | 0.284*** | 2.789*** | -0.260 | |
| | (0.117) | (0.522) | (0.335) | (0.119) | (0.641) | (0.257) | (0.118) | (0.535) | (0.295) | |
| Ln Sector Exports $_{ij\ t-1}$/ GDP $_{i\ t-1}$ | 0.146** | 0.424 | 1.657*** | 0.146** | 0.454 | 1.783*** | 0.148** | 0.514 | 1.805*** | |
| | (0.0665) | (0.378) | (0.324) | (0.0675) | (0.370) | (0.264) | (0.0666) | (0.419) | (0.326) | |
| Ln Total Trade/ GDP $_{i\ t-1}$ | -0.897*** | -3.344* | -1.149 | -0.896*** | -3.319* | -1.043 | -0.903*** | -3.339* | -0.560 | |
| | (0.178) | (2.139) | (1.420) | (0.178) | (2.063) | (1.237) | (0.181) | (2.138) | (1.404) | |
| Sector Exports $_{ij\ t-1}$/ Total Exports $_{ij\ t-1}$ | 0.364*** | -0.664** | -0.768** | 0.361*** | -0.775** | -1.19*** | 0.360*** | -0.812** | -1.33*** | |
| | (0.104) | (0.359) | (0.353) | (0.0960) | (0.380) | (0.312) | (0.0963) | (0.409) | (0.381) | |
| Polity 2 $_{it-1}$ | -0.0793* | -0.392 | 0.787* | -0.0799* | -0.423* | 0.760** | -0.0798* | -0.433* | 0.762** | |
| | (0.0491) | (0.312) | (0.511) | (0.0487) | (0.289) | (0.407) | (0.0486) | (0.294) | (0.363) | |
| Polity 2 $_{jt-1}$ | 0.0230 | -0.92*** | -0.290** | 0.0223 | -0.99*** | -0.28*** | 0.0218 | -0.97*** | -0.41*** | |
| | (0.0409) | (0.160) | (0.145) | (0.0408) | (0.213) | (0.111) | (0.0405) | (0.169) | (0.159) | |
| RTA Dispute $_{ijst-1}$ | 1.284*** | 1.362** | 3.709*** | 1.283*** | 1.308** | 3.295*** | 1.290*** | 1.350** | 3.187*** | |
| | (0.224) | (0.719) | (0.812) | (0.225) | (0.729) | (0.675) | (0.224) | (0.738) | (0.682) | |
| WTO Dispute $_{ijst-1}$ | 1.433** | 2.436** | 4.755*** | 1.439** | 2.414** | 4.511*** | 1.450** | 2.471** | 4.355*** | |
| | (0.770) | (1.266) | (1.231) | (0.762) | (1.191) | (1.095) | (0.763) | (1.255) | (0.990) | |
| Both Dispute $_{ijst-1}$ | 3.370*** | 3.849*** | 5.022*** | 3.377*** | 3.895*** | 4.837*** | 3.376*** | 3.874*** | 4.889*** | |
| | (0.803) | (0.779) | (1.722) | (0.800) | (0.793) | (1.662) | (0.801) | (0.798) | (1.664) | |
| CAN | 0.487 | -17.4*** | -22.97*** | 0.485 | -18.6*** | -23.6*** | 0.468 | -16.3*** | -21.3*** | |
| | (0.401) | (1.824) | (1.367) | (0.399) | (1.742) | (1.131) | (0.400) | (1.892) | (1.106) | |
| MERC | 0.656** | 0.766* | -4.575*** | 0.655** | 1.118** | -3.58*** | 0.643** | 1.098** | -3.45*** | |
| | (0.342) | (0.527) | (1.606) | (0.339) | (0.642) | (1.083) | (0.341) | (0.563) | (1.129) | |
| CACM | -1.025** | -9.61*** | -20.89*** | -1.024** | -11.2*** | -22.3*** | -1.046** | -9.319** | -21.4*** | |
| | (0.549) | (4.119) | (1.990) | (0.548) | (4.080) | (1.562) | (0.550) | (4.104) | (1.552) | |
| Regional Dispute Years | -0.269*** | 5.837*** | -3.708* | -0.270*** | 6.942*** | -3.731* | -0.270*** | 5.799*** | -3.743** | |
| | (0.0748) | (0.966) | (2.263) | (0.0749) | (0.777) | (2.318) | (0.0751) | (0.933) | (2.184) | |
| Regional Dispute Years$^2$ | 0.0240*** | -7.05*** | 1.593* | 0.0241*** | -8.19*** | 1.628* | 0.0241*** | -6.999*** | 1.630* | |
| | (0.00898) | (0.462) | (1.125) | (0.00896) | (0.506) | (1.123) | (0.00903) | (0.463) | (1.086) | |
| Regional Dispute Years$^3$ | -0.0005** | 0.263*** | -0.163 | -0.00054** | 0.305*** | -0.170* | -0.0005** | 0.261*** | -0.171* | |
| | (0.00027) | (0.0166) | (0.133) | (0.000268) | (0.0188) | (0.130) | (0.000270) | (0.0166) | (0.128) | |
| constant | 3.151* | -17.94** | 37.94*** | 3.145* | -19.41** | 36.32*** | 3.256* | -17.95** | 34.10*** | |
| | (2.381) | (9.585) | (10.26) | (2.390) | (9.313) | (7.288) | (2.406) | (9.773) | (10.80) | |
| N | | 3661 | | | 3661 | | | 3661 | | |

| | |
|---|---|
| Pseudo $R^2$ | 0.318 |
| Log Pseudolikelihood | -940.98 |

Robust standard errors in parentheses. P values are calculated for a one-tailed hypothesis test. Observations clustered by dyad
*p < 0.10, **p < 0.05, ***p < 0.01

**Table A.1.8: Effect of Total Disputes Initiated in Previous Five Years, Same Subject Area**

| | Model 13A | | | Model 15A | | | Model 16 A | | | Model 17A | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | No Dispute | Regional Dispute | Both Forums | No Dispute | Regional Dispute | Both Forums | No Dispute | Regional Dispute | Both Forums | No Dispute | Regional Dispute | Both Forums |
| # RTA Disputes $_{is\ \Sigma(t-1,t-5)}$ | 0.0496 | 0.0887 | 0.0955 | 0.440*** | 0.434*** | 0.271 | 1.062*** | 1.063*** | 1.002*** | 0.0800 | 0.111 | 0.102 |
| | (0.0767) | (0.0766) | (0.0795) | (0.126) | (0.126) | (0.215) | (0.162) | (0.132) | (0.365) | (0.0993) | (0.0988) | (0.0991) |
| # RTA Disputes $_{is\ \Sigma(t-1,t-5)}$ X Sector Exports $_{ij\ t-1}$/ Total Exports $_{ij\ t-1}$ | | | | 0.195*** | 0.164*** | 0.0943 | | | | | | |
| | | | | (0.0577) | (0.0564) | (0.0842) | | | | | | |
| # RTA Disputes $_{is\ \Sigma(t-1,t-5)}$ X Ln Sector Exports $_{ij\ t-1}$/ GDP $_{i\ t-1}$ | | | | | | | 0.0762*** | 0.0735*** | 0.0686*** | | | |
| | | | | | | | (0.0125) | (0.00993) | (0.0253) | | | |
| # RTA Disputes $_{is\ \Sigma(t-1,t-5)}$ X Power $_{ij\ t-1}$ | | | | | | | | | | 0.0555* | 0.0401 | -0.00483 |
| | | | | | | | | | | (0.0417) | (0.0400) | (0.0389) |
| # WTO Disputes $_{is\ \Sigma(t-1,t-5)}$ | -0.466** | -0.460** | -0.519** | -0.778*** | -0.763*** | -0.635* | -0.667*** | -0.651*** | -0.692*** | -0.527** | -0.509** | -0.546* |
| | (0.241) | (0.242) | (0.308) | (0.264) | (0.257) | (0.425) | (0.134) | (0.134) | (0.291) | (0.291) | (0.295) | (0.368) |
| # Third Party | -0.0515 | -0.110* | -0.0951 | -0.0511 | -0.114* | -0.0997 | -0.0630 | -0.123* | -0.108 | -0.0573 | -0.114* | -0.0908 |
| | (0.0664) | (0.0727) | (0.107) | (0.0772) | (0.0844) | (0.109) | (0.0778) | (0.0853) | (0.116) | (0.0659) | (0.0714) | (0.104) |
| Power | 0.819 | 0.722 | 2.154*** | 1.408* | 1.284 | 2.452*** | 0.948 | 0.844 | 2.281*** | 0.663 | 0.654 | 2.789*** |
| | (1.015) | (0.998) | (0.853) | (1.051) | (1.039) | (1.003) | (1.000) | (0.985) | (0.796) | (1.082) | (1.078) | (1.141) |
| Ln GDP pc $_{it-1}$ | -1.495* | -1.613* | -2.495* | -2.212** | -2.339** | -3.033* | -1.789** | -1.896** | -2.740** | -1.565 | -1.739* | -2.827* |
| | (1.087) | (1.051) | (1.640) | (1.325) | (1.292) | (1.895) | (1.065) | (1.041) | (1.614) | (1.235) | (1.202) | (1.798) |
| Ln GDP pc $_{jt-1}$ | -2.361*** | -2.014*** | -2.246*** | -2.813*** | -2.506*** | -3.041*** | -2.812*** | -2.469*** | -2.708*** | -2.390*** | -2.040*** | -2.275*** |
| | (0.763) | (0.770) | (0.806) | (0.933) | (0.933) | (1.017) | (0.826) | (0.833) | (0.850) | (0.786) | (0.790) | (0.803) |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ln Sector Exports $_{ij\ t-1}$/ GDP $_{i\ t-1}$ | | | | | | | | | | | | |
| | -0.543* | -0.339 | 0.844*** | -0.389 | -0.183 | 0.853** | -0.637** | -0.420* | 0.772*** | -0.616** | -0.414 | 1.142*** |
| | (0.331) | (0.349) | (0.336) | (0.338) | (0.356) | (0.399) | (0.305) | (0.314) | (0.321) | (0.355) | (0.370) | (0.273) |
| Ln Total Trade/ GDP $_{i\ t-1}$ | | | | | | | | | | | | |
| | 3.289** | 2.391* | 3.010** | 3.678*** | 2.719** | 3.127** | 3.439** | 2.528* | 3.146*** | 3.336** | 2.463 | 3.350** |
| | (1.667) | (1.766) | (1.368) | (1.453) | (1.555) | (1.372) | (1.805) | (1.890) | (1.340) | (1.840) | (1.943) | (1.668) |
| Sector Exports $_{ij\ t-1}$/ Total Exports $_{ij\ t-1}$ | | | | | | | | | | | | |
| | 1.034*** | 1.286*** | -0.0416 | 0.485* | 0.846** | -0.0367 | 0.970*** | 1.219*** | -0.0942 | 1.131*** | 1.373*** | -0.311 |
| | (0.310) | (0.351) | (0.358) | (0.333) | (0.381) | (0.394) | (0.290) | (0.327) | (0.370) | (0.321) | (0.365) | (0.378) |
| Polity 2 $_{it-1}$ | 0.470* | 0.387 | 0.964* | 0.648** | 0.567* | 1.091* | 0.556** | 0.473* | 1.035* | 0.526* | 0.440* | 0.978* |
| | (0.312) | (0.305) | (0.707) | (0.367) | (0.362) | (0.739) | (0.315) | (0.310) | (0.695) | (0.344) | (0.337) | (0.751) |
| Polity 2 $_{jt-1}$ | 1.004*** | 1.023*** | 0.590** | 1.213*** | 1.235*** | 0.945*** | 1.161*** | 1.180*** | 0.749*** | 1.028*** | 1.044*** | 0.553** |
| | (0.240) | (0.247) | (0.254) | (0.344) | (0.351) | (0.368) | (0.268) | (0.275) | (0.263) | (0.255) | (0.263) | (0.292) |
| RTA Dispute $_{ijst-1}$ | | | | | | | | | | | | |
| | -1.746*** | -0.368 | 0.982*** | -1.911*** | -0.565* | 0.914*** | -1.731*** | -0.352 | 1.019*** | -1.749*** | -0.389 | 0.942*** |
| | (0.471) | (0.422) | (0.345) | (0.490) | (0.425) | (0.370) | (0.476) | (0.415) | (0.395) | (0.476) | (0.423) | (0.365) |
| WTO Dispute $_{ijst-1}$ | | | | | | | | | | | | |
| | -1.576*** | -0.161 | 2.032*** | -1.178** | 0.195 | 2.347*** | -1.352** | 0.0513 | 2.242*** | -1.546*** | -0.139 | 2.033*** |
| | (0.613) | (1.394) | (0.441) | (0.670) | (1.455) | (0.490) | (0.687) | (1.449) | (0.418) | (0.573) | (1.360) | (0.406) |
| Both Dispute $_{ijst-1}$ | | | | | | | | | | | | |
| | -3.124*** | 0.101 | 0.944 | -2.617*** | 0.461 | 1.172 | -3.040*** | 0.168 | 1.019 | -3.044*** | 0.157 | 0.923 |
| | (0.639) | (1.087) | (1.208) | (0.612) | (1.050) | (1.411) | (0.649) | (1.007) | (1.096) | (0.652) | (1.140) | (1.228) |
| CAN | 13.57*** | 14.36*** | -4.696** | 12.92*** | 13.62*** | -5.137*** | 13.12*** | 13.95*** | -5.214*** | 13.05*** | 13.67*** | -5.243** |
| | (1.765) | (1.721) | (2.217) | (1.452) | (1.468) | (1.835) | (1.751) | (1.781) | (2.160) | (1.987) | (1.967) | (2.436) |
| MERC | -0.739 | 0.128 | -3.070* | -1.171 | -0.354 | -3.635* | -1.376* | -0.483 | -3.639** | -0.739 | 0.0225 | -3.591** |
| | (1.023) | (1.178) | (1.940) | (1.274) | (1.427) | (2.224) | (1.040) | (1.223) | (1.908) | (1.106) | (1.263) | (2.099) |
| CACM | 7.598** | 7.064* | -11.15*** | 4.343 | 3.715 | -14.55*** | 5.835* | 5.331 | -12.98*** | 6.753* | 6.037 | -12.38*** |
| | (4.263) | (4.307) | (4.187) | (5.095) | (5.125) | (5.159) | (4.458) | (4.505) | (4.236) | (4.792) | (4.828) | (4.808) |
| Constant | 14.05 | 16.20* | 34.71** | 22.46* | 25.48** | 43.89*** | 17.69* | 19.98* | 38.46*** | 13.38 | 16.06 | 41.11*** |
| | (12.63) | (12.33) | (14.94) | (15.13) | (14.67) | (17.35) | (12.76) | (12.26) | (14.97) | (12.91) | (12.71) | (14.94) |

| | | | | |
|---|---|---|---|---|
| Observations | 3,661 | 3,661 | 3,661 | 3,661 |
| Pseudo R-squared | 0.305 | 0.313 | 0.306 | 0.307 |

**Table A.1.9: Effect of Total Disputes Initiated in Previous Five Years, Same Subject Area**

| | Model 13B | | | Model 17B | | |
|---|---|---|---|---|---|---|
| | No Dispute | Regional Dispute | Both Forums | No Dispute | Regional Forum | Both Forums |
| # RTA Disputes $_{i\,\Sigma(t-1,t-5)}$ | -0.076*** | -0.067*** | -0.072*** | -0.0072*** | -0.064*** | -0.074*** |
| | (0.017) | (0.017) | (0.019) | (0.021) | (0.0199) | (0.019) |
| # RTA Disputes $_{i\,\Sigma(t-1,t-5)}$ X Power $_{ij\,t-1}$ | | | | -0.012 | -0.016 | -0.027 |
| | | | | (0.014) | (0.014) | (0.022) |
| # WTO Disputes $_{i\,\Sigma(t-1,t-5)}$ | 0.167 | 0.087 | 0.224* | 0.149 | 0.065 | 0.210 |
| | (0.164) | (0.099) | (0.165) | (0.180) | (0.115) | (0.174) |
| # Third Party | 0.007 | -0.051 | -0.033 | 0.0006 | -0.056 | -0.037 |
| | (0.069) | (0.077) | (0.112) | (0.068) | (0.077) | (0.108) |
| Power | 3.182*** | 3.07*** | 4.451*** | 3.180*** | 3.186*** | 4.911*** |
| | (0.811) | (0.805) | (0.801) | (1.093) | (1.089) | (1.198) |
| Ln GDP pc $_{it-1}$ | -2.407*** | -2.459*** | -3.434*** | -2.44*** | -2.573*** | -3.729*** |
| | (0.580) | (0.563) | (1.039) | (0.6696) | (0.660) | (1.128) |
| Ln GDP pc $_{jt-1}$ | -1.925** | -1.623** | -1.587** | -1.918** | -1.600** | -1.511** |
| | (0.930) | (0.948) | (0.819) | (0.932) | (0.942) | (0.877) |
| Ln Sector Exports $_{ij\,t-1}$/ GDP $_{i\,t-1}$ | 0.647** | 0.836** | 2.028*** | 0.616* | 0.803** | 2.152*** |
| | (0.358) | (0.362) | (0.395) | (0.461) | (0.458) | (0.471) |
| Ln Total Trade/ GDP $_{i\,t-1}$ | 4.604*** | 3.805*** | 4.255*** | 4.463*** | 3.698** | 4.239*** |
| | (1.603) | (1.626) | (1.571) | (1.771) | (1.787) | (1.564) |
| Sector Exports $_{ij\,t-1}$/ Total Exports $_{ij\,t-1}$ | -0.231 | 0.093 | -1.218*** | -0.187 | 0.142 | -1.321*** |
| | (0.322) | (0.346) | (0.522) | (0.414) | (0.417) | (0.534) |
| Polity 2 $_{it-1}$ | 0.360*** | 0.286** | 0.891** | 0.384*** | 0.309** | 0.947** |
| | (0.148) | (0.150) | (0.493) | (0.163) | (0.162) | (0.477) |
| Polity 2 $_{jt-1}$ | 0.657** | 0.676** | 0.125 | 0.6796** | 0.697** | 0.106 |
| | (0.390) | (0.391) | (0.303) | (0.396) | (0.397) | (0.339) |
| RTA Dispute $_{ijst-1}$ | -1.518*** | -0.063 | 1.359*** | -1.554*** | -0.104 | 1.338*** |
| | (0.540) | (0.504) | (0.230) | (0.553) | (0.516) | (0.210) |
| WTO Dispute $_{ijst-1}$ | -1.546** | -0.228 | 2.136*** | -1.546** | -0.196 | 2.208*** |
| | (0.463) | (1.463) | (0.521) | (0.735) | (1.478) | (0.491) |
| Both Dispute $_{ijst-1}$ | -3.032*** | 0.284 | 1.133 | -3.068*** | 0.277 | 1.114 |
| | (0.463) | (1.050) | (1.297) | (0.504) | (1.076) | (1.299) |
| CAN | 13.677*** | 14.211*** | -4.247** | 13.095*** | 13.418*** | -4.924*** |
| | (1.435) | (1.364) | (1.843) | (1.185) | (1.111) | (1.786) |
| MERC | 8.567*** | 9.014*** | 6.842** | 7.210** | 7.488** | 4.982 |
| | (2.582) | (2.548) | (3.144) | (3.731) | (3.675) | (4.205) |
| CACM | 5.456* | 4.622 | -12.726*** | 5.167* | 4.104 | 13.269** |
| | (3.881) | (3.862) | (3.627) | (3.90) | (3.852) | (3.791) |
| Constant | 32.76*** | 34.47*** | 52.256*** | 32.805** | 35.155*** | 55.889*** |
| | (12.374) | (12.429) | (12.963) | (14.363) | (14.258) | (15.231) |

| | | |
|---|---|---|
| Observations | 3661 | 3661 |
| Pseudo R-squared | 0.300 | 0.301 |

**Table A.1.10: Stratified Cox Models**

| | Model 18 | Model 19 | Model 20 | Model 21 |
|---|---|---|---|---|
| # Regional Disputes $_{ijst-1}$ | 0.032*** | | 0.067*** | |
| | (0.012) | | (0.022) | |
| # Regional Disputes $_{ijs\ \Sigma(t-1,\ t-5)}$ | | 0.018*** | | 0.037*** |
| | | (0.005) | | (0.009) |
| # WTO Disputes (MS) $_{ijst-1}$ | -0.696 | | -0.551 | |
| | (0.747) | | (0.575) | |
| # WTO Disputes $_{ijs\ \Sigma(t-1,\ t-5)}$ | | -0.173 | | -0.001 |
| | | (0.190) | | (0.156) |
| # Third Party | -0.064*** | -0.070*** | -0.091*** | -0.091*** |
| | (0.026) | (0.026) | (0.036) | (0.036) |
| Power | 0.060 | 0.052 | -0.375*** | -0.373*** |
| | (0.087) | (0.088) | (0.076) | (0.072) |
| Ln GDP pc $_{it-1}$ | -0.193** | -0.164* | -0.257* | -0.209* |
| | (0.114) | (0.112) | (0.159) | (0.155) |
| Ln GDP pc $_{jt-1}$ | 0.222** | 0.209** | 0.002 | -0.020 |
| | (0.104) | (0.106) | (0.120) | (0.114) |
| Ln Sector Exports $_{ij\ t-1}$/GDP$_{i\ t-1}$ | 0.217*** | 0.219*** | 0.062 | 0.064 |
| | (0.070) | (0.071) | (0.064) | (0.066) |
| Ln Total Trade/ GDP $_{i\ t-1}$ | -0.436** | -0.429** | -1.923*** | -1.799*** |
| | (0.198) | (0.198) | (0.259) | (0.244) |
| Sector Exports $_{ij\ t-1}$/ Total Exports $_{ij\ t-1}$ | 0.128* | 0.131* | 0.335*** | 0.353*** |
| | (0.095) | (0.097) | (0.087) | (0.092) |
| Polity 2 $_{it-1}$ | -0.024 | -0.025 | -0.125*** | -0.125*** |
| | (0.039) | (0.039) | (0.045) | (0.046) |
| Polity 2 $_{jt-1}$ | 0.067** | 0.071** | 0.024 | 0.037 |
| | (0.032) | (0.033) | (0.054) | (0.054) |
| RTA Dispute $_{ijst-1}$ | 0.879*** | 0.880*** | 1.285*** | 1.253*** |
| | (0.153) | (0.151) | (0.170) | (0.176) |
| WTO Dispute $_{ijst-1}$ | 1.443*** | 1.610*** | 1.542*** | 1.613*** |
| | (0.370) | (0.363) | (0.341) | (0.349) |
| Both Dispute $_{ijst-1}$ | 1.725*** | 1.736*** | 1.807*** | 1.874*** |
| | (0.419) | (0.399) | (0.370) | (0.354) |
| CAN | 0.369 | 0.367 | -0.622 | -0.498 |
| | (0.448) | (0.460) | (0.511) | (0.504) |
| MERC | 0.347 | 0.335 | -0.477 | -0.393 |
| | (0.393 | (0.414) | (0.394) | (0.413) |
| CACM | -0.537 | -0.544 | -1.433*** | -1.420*** |
| | (0.508) | (0.513) | (0.480) | (0.469) |
| Observations | 3,916 | 3,916 | 3,916 | 3,916 |
| Wald $\chi^2$ | 487.48 | 469.03 | 1394.61 | 1382.52 |

| | | | | |
|---|---|---|---|---|
| Prob > $\chi^2$ | 0.000 | 0.000 | 0.000 | 0.000 |

## A.1.2 MARGINAL EFFECTS TABLES

**Table A.1.11: Marginal Effects of Previous Regional Dyadic Dispute Experience**

| | | Model 1 | Model 2 | Model 3 | Model 7 | Model 8 | Model 12 | Model 13 | Model 14 |
|---|---|---|---|---|---|---|---|---|---|
| | Development | | | | | | | | |
| Marginal Effect of | | 0.015*** | 0.0023*** | 0.019*** | 0.006*** | 0.008*** | 0.0089*** | 0.007* | 0.0099*** |
| Regional Disputes | | (0.003) | (0.0006) | (0.004) | (0.001) | (0.002) | (0.0038) | (0.004) | (0.0039) |
| | Lowest | | | 0.035*** | | 0.017*** | | | 0.019*** |
| | | | | (0.011) | | (0.006) | | | (0.008) |
| | Low | | | 0.029*** | | 0.013*** | | | 0.015*** |
| | | | | (0.008) | | (0.004) | | | (0.006) |
| | Mean | | | 0.021*** | | 0.009*** | | | 0.011*** |
| | | | | (0.004) | | (0.002) | | | (0.004) |
| | High | | | 0.014*** | | 0.006*** | | | 0.007** |
| | | | | (0.003) | | (0.002) | | | (0.003) |
| | Higher | | | 0.009*** | | 0.0003* | | | 0.004 |
| | | | | (0.003) | | (0.002) | | | (0.003) |
| | Highest | | | 0.005* | | 0.0009 | | | 0.001 |
| | | | | (0.003) | | (0.003) | | | (0.004) |
| | Maximum | | | 0.004 | | 0.0004 | | | 0.0004 |
| | | | | (0.004) | | (0.003) | | | (0.0038) |

Note: Marginal Effects are calculated with all variables at their means unless otherwise noted. Development level determined by mean and standard deviation of the natural log of the complainant's GDP per capita. Robust standard errors in parentheses. P values are calculated for a one-tailed hypothesis test. Observations clustered by dyad
*p < 0.10, **p < 0.05, ***p < 0.01

**Table A.1.12: Conditional Marginal Effects of Previous Dyadic Dispute Experience**

| | | Model 4 | Model A4 | Model 9 | Model 15 |
|---|---|---|---|---|---|
| | Sector Exports/Total Exports | | | | |
| Marginal Effect of | | 0.016*** | 0.002*** | 0.007*** | 0.012*** |
| Regional Dispute Experience | | (0.005) | (0.0007) | (0.002) | (0.005) |

| | | | | |
|---|---|---|---|---|
| Minimum | 0.0009 | 0.0001 | 0.0006 | 0.003 |
| | (0.0012) | (0.0002) | (0.0008) | (0.004) |
| Lowest | 0.00089 | 0.0001 | 0.0007 | 0.004 |
| | (0.0013) | (0.0002) | (0.0008) | (0.004) |
| Lower | 0.0016 | 0.0001 | 0.0012 | 0.005 |
| | (0.0019) | (0.0003) | (0.0012) | (0.004) |
| Low | 0.0027 | 0.0003 | 0.0017 | 0.0066* |
| | (0.0027) | (0.0004) | (0.0015) | (0.0047) |
| Medium Lowest | 0.0044 | 0.0005 | 0.002* | 0.009** |
| | (0.0036) | (0.0006) | (0.0019) | (0.005) |
| Medium Lower | 0.0069* | 0.0009 | 0.004** | 0.011** |
| | (0.0045) | (0.0008) | (0.002) | (0.005) |
| Medium Low | 0.0107** | 0.0014** | 0.005*** | 0.0125*** |
| | (0.0051) | (0.0008) | (0.002) | (0.0046) |
| Mean | 0.0163*** | 0.002*** | 0.007*** | 0.012*** |
| | (0.0047) | (0.0007) | (0.002) | (0.005) |
| High | 0.0237*** | 0.003*** | 0.008*** | 0.007 |
| | (0.0061) | (0.001) | (0.003) | (0.006) |
| Highest | 0.028*** | 0.0038* | 0.009** | 0.001 |
| | (0.0099) | (0.0025) | (0.005) | (0.008) |

Note: Marginal Effects are calculated with all variables at their means unless otherwise noted. Ratio level determined by mean and standard deviation of the natural log of the ratio of sector exports to total exports. Robust standard errors in parentheses. P values are calculated for a one-tailed hypothesis test. Observations clustered by dyad
*p < 0.10, **p < 0.05, ***p < 0.01

**Table A.1.13: Conditional Marginal Effects of Previous Dyadic Dispute Experience**

| | | Model 5 | Model A5 | Model 10 | Model 16 |
|---|---|---|---|---|---|
| | Sector Exports/ GDP | | | | |
| Marginal Effect of | | 0.016*** | 0.0022*** | 0.007*** | 0.008* |
| Regional Dispute Experience | | (0.005) | (0.0008) | | (0.001) |
| | Lowest | 0.003 | 0.0005 | 0.004 | 0.0023 |
| | | (0.004) | (0.0008) | (0.003) | (0.0028) |
| | Low | 0.008 | 0.0015 | 0.006*** | 0.0057 |
| | | (0.006) | (0.0012) | (0.002) | (0.0052) |

| | | | | |
|---|---|---|---|---|
| | Mean | 0.028*** | 0.0036** | 0.007** | 0.007 |
| | | (0.009) | (0.0019) | (0.003) | (0.006) |
| | High | 0.137 | 0.0079 | -0.005 | 0.039 |
| | | (0.17) | (0.017) | (0.025) | (0.146) |
| | Highest | 0.003 | 0.0005 | 0.0002 | 0.001 |
| | | (0.015) | (0.002) | (0.002) | (0.006) |

Note: Marginal Effects are calculated with all variables at their means unless otherwise noted. Ratio level determined by mean and standard deviation of the natural log of the ratio of sector exports to complainant's GDP. Robust standard errors in parentheses. P values are calculated for a one-tailed hypothesis test. Observations clustered by dyad
*p < 0.10, **p < 0.05, ***p < 0.01

**Table A.1.14: Conditional Marginal Effects of Previous Dyadic Dispute Experience**

| | | Model 6 | Model A6 | Model 11 | Model 17 |
|---|---|---|---|---|---|
| | Power | | | | |
| Marginal Effect of | | 0.015*** | 0.0023*** | 0.006*** | 0.008*** |
| Regional Dispute Experience | | (0.003) | (0.0006) | (0.002) | (0.003) |
| | Minimum | 0.023* | 0.003* | 0.010 | 0.020* |
| | | (0.014) | (0.0023) | (0.009) | (0.013) |
| | Lowest | 0.021** | 0.0029* | 0.009 | 0.018** |
| | | (0.012) | (0.0019) | (0.007) | (0.010) |
| | Lower | 0.019*** | 0.0027** | 0.008** | 0.014** |
| | | (0.008) | (0.0012) | (0.005) | (0.007) |
| | Low | 0.017*** | 0.0025*** | 0.007*** | 0.011*** |
| | | (0.004) | (0.0007) | (0.003) | (0.004) |
| | Mean | 0.015*** | 0.002*** | 0.006*** | 0.008*** |
| | | (0.003) | (0.0006) | (0.002) | (0.003) |
| | Highest | 0.013*** | 0.002*** | 0.005*** | 0.005 |
| | | (0.004) | (0.0008) | (0.001) | (0.004) |

Note: Marginal Effects are calculated with all variables at their means unless otherwise noted. Ratio level determined by mean and standard deviation of the variable *Power*. Robust standard errors in parentheses. P values are calculated for a one-tailed hypothesis test. Observations clustered by dyad
*p < 0.10, **p < 0.05, ***p < 0.01

## A.2 CHAPTER 5 SUPPLEMENTAL TABLES

### A.2.1 EMPIRICAL RESULTS OF RE-ESTIMATION OF MODELS

**Table A.2.1: Simplified Models of the Effect of Previous Decisions Issued in Regional Disputes**

| | Simplified Model | | | Reduced Model | | | Reduced Conditional Model | | |
|---|---|---|---|---|---|---|---|---|---|
| | RTA Dispute | WTO Dispute | Both Forums | RTA Dispute | WTO Dispute | Both Forums | RTA Dispute | WTO Dispute | Both Forums |
| # RTA Decisions $_{i\,s\,\Sigma(t-1;\,t-5)}$ | 0.235*** | 0.190 | 0.785*** | 0.192*** | 0.0346 | 0.680*** | 0.334 | 0.0940 | 2.305* |
| | (0.0676) | (0.214) | (0.101) | (0.0576) | (0.256) | (0.251) | (0.345) | (2.176) | (1.741) |
| # RTA Decisions $_{i\,s\,\Sigma(t-1;\,t-5)}$ X GDP pc $_{i\,t-1}$ | | | | | | | -0.0179 | -0.00715 | -0.164 |
| | | | | | | | (0.0428) | (0.215) | (0.175) |
| # WTO Decisions $_{i\,s\,\Sigma(t-1;\,t-5)}$ | -0.0485 | -15.71*** | -19.63*** | 0.0961 | -20.00*** | -25.15*** | 0.163 | -18.02*** | -23.15*** |
| | (0.332) | (1.302) | (2.396) | (0.227) | (1.896) | (5.149) | (0.319) | (2.369) | (5.573) |
| # RTA Disputes $_{i\,s\,t-1}$ | 0.267*** | -0.00824 | 0.284*** | 0.221*** | -0.132 | 0.211** | 0.219*** | -0.131 | 0.214** |
| | (0.0740) | (0.165) | (0.0801) | (0.0688) | (0.132) | (0.120) | (0.0686) | (0.129) | (0.122) |
| # WTO Disputes $_{i\,s\,t-1}$ | -0.162 | 1.122*** | 0.906* | 0.0528 | 1.307*** | 1.453* | 0.0870 | 1.307*** | 1.415* |
| | (0.243) | (0.244) | (0.606) | (0.187) | (0.471) | (0.889) | (0.194) | (0.473) | (0.863) |
| # Third Party $_{i\,t-1}$ | -0.0498** | 0.0680 | -0.00389 | -0.056*** | 0.0655 | -0.0642 | -0.056*** | 0.0649 | -0.0774 |
| | (0.0277) | (0.0548) | (0.0691) | (0.0242) | (0.0587) | (0.118) | (0.0242) | (0.0584) | (0.128) |
| lnc1gdppc | | | | -0.0716 | 0.399** | 0.442* | -0.0581 | 0.403** | 0.587* |
| | | | | (0.130) | (0.189) | (0.343) | (0.139) | (0.201) | (0.432) |
| lnc2gdppc | | | | 0.475*** | 0.437* | 0.625* | 0.475*** | 0.436* | 0.606* |
| | | | | (0.0954) | (0.271) | (0.434) | (0.0963) | (0.271) | (0.417) |
| RTA Dispute $_{ij\,s\,t-1}$ | | | | 1.572*** | 1.568*** | 3.221*** | 1.572*** | 1.562*** | 3.198*** |
| | | | | (0.201) | (0.543) | (0.938) | (0.201) | (0.542) | (0.952) |
| WTO Dispute $_{ij\,s\,t-1}$ | | | | 1.180** | 2.573** | 3.751*** | 1.168** | 2.579** | 3.772*** |
| | | | | (0.614) | (1.192) | (1.280) | (0.634) | (1.196) | (1.197) |
| Both Forum Disputes $_{ij\,s\,t-1}$ | | | | 3.766*** | 3.318*** | 5.158*** | 3.765*** | 3.320*** | 5.145*** |
| | | | | (0.797) | (0.401) | (1.933) | (0.796) | (0.374) | (1.899) |
| RTA Dispute Years | | | | -0.196** | -1.558*** | -3.100 | -0.193** | -1.557*** | -2.990 |
| | | | | (0.0846) | (0.494) | (2.776) | (0.0841) | (0.491) | (2.724) |
| RTA Dispute Years$^2$ | | | | 0.0140* | 0.191*** | 1.289 | 0.0138* | 0.191*** | 1.225 |
| | | | | (0.00947) | (0.0678) | (1.305) | (0.00946) | (0.0675) | (1.284) |
| RTA Dispute Years$^3$ | | | | -0.000253 | -0.0059*** | -0.137 | -0.000248 | -0.0059*** | -0.128 |
| | | | | (0.000260) | (0.00224) | (0.147) | (0.000260) | (0.00223) | (0.144) |
| CAN | -0.777** | -18.13*** | -23.09*** | 0.416 | -19.60*** | -23.28*** | 0.420 | -19.23*** | -25.55*** |
| | (0.452) | (0.597) | (0.992) | (0.427) | (1.310) | (2.768) | (0.435) | (1.386) | (5.614) |
| MERC | 0.794** | -3.011*** | -2.429*** | 1.267*** | -2.209** | -1.727** | 1.276*** | -2.206** | -1.724** |
| | (0.457) | (1.037) | (0.836) | (0.375) | (1.102) | (0.890) | (0.386) | (1.106) | (0.847) |
| CACM | -2.168*** | -3.595*** | -18.02*** | -0.695 | -1.250 | -11.50*** | -0.678 | -1.246 | -10.70*** |
| | (0.518) | (1.094) | (0.691) | (0.582) | (1.117) | (1.911) | (0.596) | (1.131) | (1.878) |
| Constant | -2.636*** | -4.237*** | -4.586*** | -6.799*** | -11.91*** | -15.28** | -6.911*** | -11.94*** | -16.45*** |
| | (0.447) | (0.498) | (0.692) | (1.484) | (4.525) | (6.623) | (1.558) | (4.594) | (6.842) |
| Observations | | 6,704 | | | 6,704 | | | 6,704 | |
| Pseudo R-squared | | 0.242 | | | 0.321 | | | 0.321 | |

**Table A.2.2: Conditional Effect of Total RTA Decisions in Previous Five Years, Same Subject Area**

| | Model A1 | | | Model A2 | | | Model A3 | | |
|---|---|---|---|---|---|---|---|---|---|
| | RTA | WTO | RTA & WTO | RTA | WTO | RTA & WTO | RTA | WTO | RTA & WTO |
| # RTA Decisions $_{i\ s\ \Sigma(t-1;\ t-5)}$ X GDP pc $_{i\ t-1}$ | | | | -0.00963 | -0.0214 | -0.202** | | | |
| | | | | (0.0145) | (0.0833) | (0.0871) | | | |
| # RTA Decisions $_{i\ s\ \Sigma(t-1;\ t-5)}$ X Sector Exports $_{ii\ s\ t-1}$ / Total Exports $_{ii\ t-1}$ | | | | | | | -0.00827* | -0.233** | -0.223** |
| | | | | | | | (0.00574) | (0.104) | (0.103) |
| # RTA Decisions $_{i\ s\ \Sigma(t-1;\ t-5)}$ | 0.064*** | -0.15*** | 0.119* | 0.140 | 0.0713 | 2.116*** | 0.0465*** | -0.53*** | -0.266 |
| | (0.0156) | (0.051) | (0.0743) | (0.113) | (0.886) | (0.831) | (0.0186) | (0.16) | (0.259) |
| # WTO Decisions $_{i\ s\ \Sigma(t-1;\ t-5)}$ | -0.0831** | 0.422*** | -0.61*** | -0.0266 | 0.428*** | -0.527*** | -0.0630 | 0.510*** | -0.345** |
| | (0.0466) | (0.170) | (0.157) | (0.117) | (0.161) | (0.203) | (0.0500) | (0.195) | (0.198) |
| # RTA Disputes $_{i\ s\ t-1}$ | 0.120* | -0.128 | 0.0809 | 0.121* | -0.128 | 0.112 | 0.116* | -0.0767 | 0.116* |
| | (0.0757) | (0.217) | (0.117) | (0.0761) | (0.215) | (0.0976) | (0.0754) | (0.200) | (0.0885) |
| # WTO Disputes $_{i\ s\ t-1}$ | 0.137 | 1.147*** | 0.296 | 0.175 | 1.154*** | 0.598 | 0.145 | 0.806* | 0.412 |
| | (0.227) | (0.298) | (0.558) | -0.238 | (0.306) | (0.675) | (0.219) | (0.552) | (0.632) |
| # Third Party $_{i\ t-1}$ | -0.0616** | -0.0194 | -0.0581 | -0.0611** | -0.0194 | -0.0439 | -0.0615** | -0.0190 | -0.0347 |
| | (0.0303) | (0.130) | (0.0937) | (0.0304) | (0.129) | (0.105) | (0.0302) | (0.136) | (0.0949) |
| Power $_{ij\ t-1}$ | -0.114 | -0.914 | 1.537*** | -0.114 | -0.924 | 1.694*** | -0.118 | -1.113 | 1.467*** |
| | (0.0913) | (1.524) | (0.563) | (0.0918) | (1.544) | (0.546) | (0.0923) | (1.687) | (0.520) |
| GDPpc $_{i\ t-1}$ | -0.204 | 1.675 | -1.327* | -0.163 | 1.725 | -1.400* | -0.236* | 2.110* | -1.404* |
| | (0.161) | (1.315) | (0.924) | (0.190) | (1.478) | (1.070) | (0.168) | (1.606) | (1.017) |
| GDPpc $_{j\ t-1}$ | 0.378*** | 2.434*** | 0.157 | 0.383*** | 2.450*** | -0.240 | 0.371*** | 2.806*** | 0.168 |
| | (0.131) | (0.612) | (0.409) | (0.132) | (0.651) | (0.428) | (0.131) | (0.882) | (0.418) |
| Sector Exports $_{ij\ s\ t-1}$ / Total Exports $_{ij\ t-1}$ | 0.253*** | -0.471 | -1.49*** | 0.253*** | -0.463 | -1.680*** | 0.295*** | -0.185 | -0.984*** |
| | (0.102) | (0.452) | (0.354) | (0.102) | (0.453) | (0.411) | (0.123) | (0.579) | (0.380) |
| Sector Exports $_{ij\ s\ t-1}$ / GDP $_{i\ t-1}$ | 0.208*** | 0.196 | 1.875*** | 0.203*** | 0.186 | 2.114*** | 0.208*** | 0.0821 | 1.814*** |
| | (0.0745) | (0.480) | (0.280) | (0.0736) | (0.483) | (0.311) | (0.0756) | (0.568) | (0.287) |
| Trade/GDP $_{i\ t-1}$ | -1.074*** | -4.303* | -0.387 | -1.058*** | -4.306* | -0.703 | -1.115*** | -4.668* | -0.401 |
| | (0.230) | (2.843) | (1.536) | (0.236) | (2.830) | (1.525) | (0.234) | (3.188) | (1.479) |
| Polity2 $_{i\ t-1}$ | -0.110** | -0.521* | 0.761** | -0.115*** | -0.531 | 1.068** | -0.103** | -0.692* | 0.739* |
| | (0.0482) | (0.400) | (0.461) | (0.0492) | (0.431) | (0.544) | (0.0487) | (0.516) | (0.522) |
| Polity2 $_{j\ t-1}$ | 0.00569 | -0.74*** | -0.61*** | 0.00231 | -0.75*** | -0.521*** | 0.00695 | -0.83*** | -0.619*** |
| | (0.0560) | (0.153) | (0.159) | (0.0557) | (0.165) | (0.166) | (0.0550) | (0.199) | (0.170) |
| RTA Dispute $_{ij\ s\ t-1}$ | 1.001*** | 1.179** | 3.003*** | 0.999*** | 1.178** | 3.007*** | 1.002*** | 1.106* | 3.182*** |
| | (0.241) | (0.677) | (0.795) | (0.241) | (0.683) | (1.009) | (0.241) | (0.787) | (0.766) |
| WTO Dispute $_{ij\ s\ t-1}$ | 1.425** | 1.730* | 4.570*** | 1.362* | 1.733* | 4.680*** | 1.427** | 1.504 | 4.417*** |
| | (0.806) | (1.146) | (0.810) | (0.841) | (1.140) | (0.893) | (0.821) | (1.340) | (1.151) |
| Both Forum Disputes $_{ij\ s\ t-1}$ | 3.143*** | 4.087*** | 4.731*** | 3.185*** | 4.104*** | 4.820*** | 3.098*** | 3.894*** | 4.763*** |
| | (0.783) | (0.528) | (1.535) | (0.817) | (0.532) | (1.629) | (0.807) | (0.506) | (1.715) |
| t | -0.210*** | 5.601*** | -3.760** | -0.206** | 5.891*** | -3.969** | -0.223*** | 5.661*** | -4.365** |
| | (0.0892) | (0.993) | (2.083) | (0.0896) | (0.991) | (1.946) | (0.0890) | (0.995) | (2.095) |
| $t^2$ | 0.0225** | -6.78*** | 1.825** | 0.0223** | -7.09*** | 1.887** | 0.0232** | -6.999*** | 2.157** |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | (0.0106) | (0.504) | (0.980) | (0.0106) | (0.505) | (0.924) | (0.0105) | (0.571) | (0.951) |
| $t^3$ | -0.00055** | 0.253*** | -0.204** | -0.00055** | 0.264*** | -0.204** | -0.00056** | 0.261*** | -0.253*** |
| | (0.000306) | (0.0182) | (0.113) | (0.000307) | (0.0182) | (0.109) | (0.000303) | (0.0207) | (0.107) |
| Andean Community | -0.0594 | -16.48*** | -22.46*** | -0.0538 | -17.68*** | -37.86*** | -0.0500 | -18.48** | -41.77*** |
| | (0.485) | (1.551) | (2.131) | (0.492) | (1.534) | (7.254) | (0.491) | (8.383) | (10.51) |
| Mercosur | 0.973*** | 0.0854 | -2.269** | 0.996*** | 0.137 | -2.634** | 0.924*** | 0.652 | -2.792** |
| | (0.354) | (0.446) | (1.201) | (0.368) | (0.552) | (1.386) | (0.368) | (0.902) | (1.423) |
| Central American Common Market | -0.843* | -8.180* | -18.46*** | -0.806 | -8.190* | -19.56*** | -0.878* | -7.860 | -20.38*** |
| | (0.617) | (5.754) | (1.758) | (0.633) | (6.174) | (1.909) | (0.608) | (6.999) | (2.053) |
| Constant | 3.871* | -16.62* | 28.90** | 3.391 | -17.26* | 33.60*** | 4.409** | -22.00* | 29.79*** |
| | (2.568) | (11.23) | (12.83) | (2.820) | (12.43) | (13.65) | (2.605) | (15.39) | (12.39) |
| Observations | 3,661 | 3,661 | 3,661 | 3,661 | 3,661 | 3,661 | 3,661 | 3,661 | 3,661 |
| Pseudo R-Squared | 0.342 | 0.342 | 0.342 | 0.343 | 0.343 | 0.343 | 0.345 | 0.345 | 0.345 |

Robust standard errors in parentheses. Adjusted for 58 clusters in dyad. Significance levels based on one-tailed hypothesis test. *** p< 0.01, ** p< 0.05, * p < 0.10

**Table A.2.3: Conditional Effect of Total RTA Decisions in Previous Five Years, Same Subject Area (Continued)**

| | Model A 4 | | | Model A5 | | |
|---|---|---|---|---|---|---|
| | RTA | WTO | RTA & WTO | RTA | WTO | RTA & WTO |
| # RTA Decisions $_{i\,s\,\Sigma(t-1;\,t-5)}$ X Sector Exports $_{ij\,s\,t-1}$ / GDP $_{i\,t-1}$ | -0.00736** | -0.178* | 0.0400 | | | |
| | (0.00369) | (0.138) | (0.0582) | | | |
| # RTA Decisions $_{i\,s\,\Sigma(t-1;\,t-5)}$ X Power $_{ij\,t-1}$ | | | | 0.00617 | -0.0391 | -0.134** |
| | | | | (0.00712) | (0.0503) | (0.0623) |
| # RTA Decisions $_{i\,s\,\Sigma(t-1;\,t-5)}$ | -0.0435 | -2.301* | 0.593 | 0.0690*** | -0.162*** | -0.00889 |
| | (0.0527) | (1.748) | (0.693) | (0.0183) | (0.0418) | (0.136) |
| # WTO Decisions $_{i\,s\,\Sigma(t-1;\,t-5)}$ | -0.0371 | 0.485** | -0.680*** | -0.0913** | 0.428*** | -0.665*** |
| | (0.0553) | (0.231) | (0.138) | (0.0512) | (0.162) | (0.234) |
| # RTA Disputes $_{i\,s\,t-1}$ | 0.115* | -0.166 | 0.0821 | 0.122* | -0.117 | 0.111* |
| | (0.0749) | (0.223) | (0.0998) | (0.0764) | (0.205) | (0.0786) |
| # WTO Disputes $_{i\,s\,t-1}$ | 0.183 | 0.760* | 0.453 | 0.127 | 1.162*** | 0.634 |
| | (0.225) | (0.537) | (0.615) | (0.221) | (0.319) | (0.691) |
| # Third Party $_{i\,t-1}$ | -0.0621** | -0.0162 | -0.0651 | -0.0620** | -0.0209 | -0.0619 |
| | (0.0299) | (0.136) | (0.0981) | (0.0302) | (0.131) | (0.108) |
| Power $_{ij\,t-1}$ | -0.0777 | -0.847 | 1.589*** | -0.122* | -0.978 | 1.763*** |
| | (0.0909) | (1.476) | (0.582) | (0.0926) | (1.612) | (0.602) |
| GDPpc $_{i\,t-1}$ | -0.264* | 1.670* | -1.435* | -0.221* | 1.812 | -1.622* |
| | (0.161) | (1.263) | (0.987) | (0.168) | (1.454) | (1.106) |
| GDPpc $_{j\,t-1}$ | 0.386*** | 3.060*** | -0.0832 | 0.394*** | 2.491*** | -0.380 |
| | (0.125) | (1.170) | (0.496) | (0.135) | (0.634) | (0.453) |
| Sector Exports $_{ij\,s\,t-1}$ / Total Exports $_{ij\,t-1}$ | 0.224** | -0.504 | -1.580*** | 0.249*** | -0.429 | -1.591*** |
| | (0.101) | (0.434) | (0.363) | (0.102) | (0.460) | (0.449) |
| Sector Exports $_{ij\,s\,t-1}$ / GDP $_{i\,t-1}$ | 0.283*** | 0.326 | 1.922*** | 0.217*** | 0.153 | 2.003*** |
| | (0.0839) | (0.427) | (0.308) | (0.0731) | (0.481) | (0.361) |
| Trade/GDP $_{i\,t-1}$ | -1.145*** | -4.336* | -0.605 | -1.091*** | -4.458* | -0.885 |
| | (0.237) | (3.016) | (1.613) | (0.238) | (3.029) | (1.725) |
| Polity2 $_{i\,t-1}$ | -0.102** | -0.557* | 0.825** | -0.109** | -0.562* | 1.003** |
| | (0.0462) | (0.426) | (0.498) | (0.0479) | (0.418) | (0.556) |
| Polity2 $_{j\,t-1}$ | 0.00314 | -0.900*** | -0.556*** | 0.00450 | -0.748*** | -0.435*** |
| | (0.0546) | (0.281) | (0.154) | (0.0560) | (0.156) | (0.144) |
| RTA Dispute $_{ij\,s\,t-1}$ | 1.006*** | 1.074* | 2.959*** | 1.001*** | 1.165** | 2.900*** |
| | (0.240) | (0.820) | (0.767) | (0.242) | (0.687) | (0.984) |
| WTO Dispute $_{ij\,s\,t-1}$ | 1.377** | 1.349 | 4.645*** | 1.435** | 1.742* | 4.620*** |
| | (0.825) | (1.385) | (0.881) | (0.811) | (1.159) | (0.909) |
| Both Forum Disputes $_{ij\,s\,t-1}$ | 3.183*** | 3.957*** | 4.676*** | 3.158*** | 4.016*** | 4.504*** |

| | | | | | | |
|---|---|---|---|---|---|---|
| | (0.818) | (0.743) | (1.317) | (0.785) | (0.578) | (1.473) |
| t | -0.226*** | 7.143*** | -3.600** | -0.209*** | 5.920*** | -3.526** |
| | (0.0903) | (1.073) | (1.794) | (0.0887) | (0.979) | (1.617) |
| $t^2$ | 0.0237** | -8.426*** | 1.732** | 0.0223** | -7.125*** | 1.664** |
| | (0.0105) | (0.557) | (0.852) | (0.0105) | (0.509) | (0.766) |
| $t^3$ | -0.000575** | 0.314*** | -0.190** | -0.000546** | 0.265*** | -0.178** |
| | (0.000302) | (0.0200) | (0.0994) | (0.000304) | (0.0184) | (0.0908) |
| Andean Community | 0.0650 | -31.16 | -29.92*** | -0.0291 | -17.52*** | -28.21*** |
| | (0.492) | (28.02) | (3.023) | (0.481) | (1.616) | (3.507) |
| Mercosur | 1.025*** | 0.809 | -2.500** | 0.987*** | 0.172 | -2.887** |
| | (0.357) | (0.946) | (1.463) | (0.354) | (0.453) | (1.651) |
| Central American Common Market | -0.854* | -12.89** | -25.98*** | -0.813* | -8.569* | -20.71*** |
| | (0.599) | (6.868) | (2.119) | (0.613) | (6.192) | (2.195) |
| Constant | 5.497** | -19.34* | 32.54** | 4.028* | -18.07* | 36.64** |
| | (2.776) | (13.45) | (15.30) | (2.586) | (11.79) | (16.70) |
| Observations | 3,661 | 3,661 | 3,661 | 3,661 | 3,661 | 3,661 |
| Pseudo R-squared | 0.345 | 0.345 | 0.345 | 0.343 | 0.343 | 0.343 |

Robust standard errors in parentheses. Adjusted for 58 clusters in dyad. Significance levels based on one-tailed hypothesis test. *** p< 0.01, ** p< 0.05, * p < 0.10

**Table A.2.4: Conditional Effect of Previous RTA Decisions, Across Subject Areas**

| | Model B1 | | | Model B2 | | | Model B3 | | |
|---|---|---|---|---|---|---|---|---|---|
| | RTA | WTO | RTA & WTO | RTA | WTO | RTA & WTO | RTA | WTO | RTA & WTO |
| # RTA Decisions $_{i\,t-1}$ X GDP pc $_{i\,t-1}$ | | | | 0.0207 | 0.171 | -0.174** | | | |
| | | | | (0.0174) | (0.438) | (0.0969) | | | |
| # RTA Decisions $_{i\,t-1}$ X Sector Exports $_{ij\,s\,t-1}$ / Total Exports $_{ij\,t-1}$ | | | | | | | 0.001 | -0.0234 | -0.108*** |
| | | | | | | | (0.006) | (0.0199) | (0.0291) |
| # RTA Decisions $_{i\,t-1}$ | 0.0455** | 0.347** | 0.129* | -0.112 | -1.384 | 1.919** | 0.0477** | 0.287** | -0.0837 |
| | (0.0204) | (0.155) | (0.0960) | (0.135) | (4.467) | (0.939) | (0.0275) | (0.158) | (0.161) |
| # WTO Decisions $_{i\,t-1}$ | -0.163 | -0.384*** | 0.0859 | -0.236* | -0.491*** | 0.148 | -0.170 | -0.391*** | 0.0261 |
| | (0.169) | (0.146) | (0.136) | (0.179) | (0.179) | (0.174) | (0.167) | (0.148) | (0.149) |
| # RTA Disputes $_{i\,s\,t-1}$ | 0.175** | -0.139 | 0.139 | 0.176** | -0.152 | 0.155* | 0.175** | -0.130 | 0.161* |
| | (0.0863) | (0.209) | (0.112) | (0.0868) | (0.204) | (0.111) | (0.0868) | (0.205) | (0.0983) |
| # WTO Disputes $_{i\,s\,t-1}$ | 0.275* | 1.098** | -0.0248 | 0.236 | 1.121** | 0.0377 | 0.276* | 1.120** | 0.246 |
| | (0.211) | (0.536) | (0.611) | (0.221) | (0.546) | (0.616) | (0.209) | (0.545) | (0.571) |
| # Third Party $_{i\,t-1}$ | -0.0687*** | -0.0342 | -0.0615 | -0.0706*** | -0.0207 | -0.0735 | -0.0687*** | -0.0314 | -0.0543 |
| | (0.0290) | (0.0899) | (0.125) | (0.0283) | (0.0934) | (0.121) | (0.0289) | (0.0897) | (0.118) |
| Power $_{ij\,t-1}$ | -0.0502 | -0.563 | 1.654*** | -0.0561 | -0.580 | 1.803*** | -0.0495 | -0.591 | 1.637*** |
| | (0.0919) | (1.358) | (0.632) | (0.0930) | (1.403) | (0.586) | (0.0921) | (1.379) | (0.614) |
| GDPpc $_{i\,t-1}$ | -0.157 | 1.543* | -1.642** | -0.245 | 1.302** | -1.670** | -0.157 | 1.567* | -1.645** |
| | (0.155) | (1.155) | (0.891) | (0.206) | (0.739) | (0.990) | (0.155) | (1.180) | (0.966) |
| GDPpc $_{j\,t-1}$ | 0.362*** | 3.258*** | 0.119 | 0.361*** | 3.255*** | 0.0447 | 0.363*** | 3.213*** | 0.228 |
| | (0.122) | (1.000) | (0.298) | (0.122) | (1.058) | (0.329) | (0.122) | (1.005) | (0.328) |
| Sector Exports $_{ij\,s\,t-1}$ / Total Exports $_{ij\,t-1}$ | 0.258*** | -1.063*** | -1.296*** | 0.253*** | -1.041*** | -1.439*** | 0.251** | -1.030** | -0.938** |
| | (0.105) | (0.447) | (0.360) | (0.105) | (0.435) | (0.448) | (0.119) | (0.451) | (0.468) |
| Sector Exports $_{ij\,s\,t-1}$ / GDP $_{i\,t-1}$ | 0.218*** | 0.703** | 1.757*** | 0.226*** | 0.680** | 1.879*** | 0.219*** | 0.727** | 1.731*** |
| | (0.0720) | (0.413) | (0.234) | (0.0719) | (0.412) | (0.281) | (0.0719) | (0.421) | (0.243) |
| Trade/GDP $_{i\,t-1}$ | -0.823*** | -3.260 | -0.145 | -0.856*** | -3.083* | -0.220 | -0.821*** | -3.339 | -0.112 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | (0.216) | (2.674) | (1.458) | (0.227) | (2.398) | (1.601) | (0.214) | (2.753) | (1.403) |
| Polity2 $_{i\,t-1}$ | -0.0876** | -0.356 | 0.759** | -0.0791* | -0.377 | 0.876* | -0.0876** | -0.360 | 0.734* |
| | (0.0487) | (0.323) | (0.461) | (0.0505) | (0.379) | (0.580) | (0.0487) | (0.326) | (0.485) |
| Polity2 $_{j\,t-1}$ | 0.0299 | -1.046*** | -0.587*** | 0.0344 | -1.031*** | -0.599*** | 0.0297 | -1.042*** | -0.610*** |
| | (0.0454) | (0.298) | (0.158) | (0.0443) | (0.310) | (0.157) | (0.0455) | (0.301) | (0.172) |
| RTA Dispute $_{ij\,s\,t-1}$ | 1.189*** | 1.579*** | 3.096*** | 1.184*** | 1.588*** | 3.085*** | 1.190*** | 1.593*** | 3.137*** |
| | (0.236) | (0.602) | (0.689) | (0.238) | (0.606) | (0.708) | (0.237) | (0.607) | (0.728) |
| WTO Dispute $_{ij\,s\,t-1}$ | 1.492** | 2.744** | 4.603*** | 1.515** | 2.802*** | 4.588*** | 1.484** | 2.752** | 4.814*** |
| | (0.810) | (1.233) | (1.053) | (0.817) | (1.167) | (1.093) | (0.807) | (1.243) | (1.145) |
| Both Forum Disputes $_{ij\,s\,t-1}$ | 3.378*** | 4.098*** | 4.766*** | 3.420*** | 4.135*** | 4.813*** | 3.387*** | 4.106*** | 4.705*** |
| | (0.867) | (0.923) | (1.632) | (0.858) | (0.927) | (1.627) | (0.867) | (0.905) | (1.648) |
| t | -0.192** | 7.129*** | -3.321** | -0.195** | 7.137*** | -3.368** | -0.192** | 5.274*** | -3.305* |
| | (0.0854) | (0.887) | (2.012) | (0.0853) | (0.856) | (1.962) | (0.0854) | (0.872) | (2.087) |
| $t^2$ | 0.0181** | -8.505*** | 1.346* | 0.0184** | -8.496*** | 1.394** | 0.0181** | -6.570*** | 1.325* |
| | (0.00986) | (0.535) | (0.882) | (0.00989) | (0.514) | (0.844) | (0.00987) | (0.537) | (0.927) |
| $t^3$ | -0.000414* | 0.317*** | -0.137* | -0.000423* | 0.316*** | -0.143* | -0.000415* | 0.245*** | -0.134* |
| | (0.000284) | (0.0196) | (0.0983) | (0.000285) | (0.0189) | (0.0932) | (0.000284) | (0.0198) | (0.103) |
| Andean Community | 0.150 | -27.88*** | -29.68*** | 0.0750 | -18.90* | -47.51*** | 0.150 | -23.94*** | -34.06*** |
| | (0.463) | (6.611) | (4.082) | (0.492) | (13.64) | (10.34) | (0.463) | (7.303) | (3.452) |
| Mercosur | 0.877*** | 2.023** | -2.817** | 0.832** | 2.035** | -3.091** | 0.875*** | 2.019** | -2.910** |
| | (0.325) | (0.922) | (1.269) | (0.362) | (0.987) | (1.420) | (0.325) | (0.936) | (1.413) |
| Central American Common Market | -0.805* | -11.23** | -23.06*** | -0.896* | -11.32*** | -22.64*** | -0.806* | -6.637 | -19.06*** |
| | (0.556) | (5.797) | (1.653) | (0.574) | (4.627) | (1.742) | (0.555) | (5.981) | (1.777) |
| Constant | 2.503 | -21.68** | 30.18*** | 3.377 | -20.18** | 31.77*** | 2.484 | -20.86** | 29.71*** |
| | (2.440) | (11.32) | (9.121) | (2.720) | (9.942) | (11.33) | (2.419) | (11.45) | (8.733) |
| Observations | 3,661 | 3,661 | 3,661 | 3,661 | 3,661 | 3,661 | 3,661 | 3,661 | 3,661 |
| Pseudo R-squared | 0.331 | 0.331 | 0.331 | 0.332 | 0.332 | 0.332 | 0.332 | 0.332 | 0.332 |

Robust standard errors in parentheses. Adjusted for 58 clusters in dyad. Significance levels based on one-tailed hypothesis test. *** p< 0.01, ** p< 0.05, * p < 0.10

**Table A.2.5: Conditional Effect of Previous RTA Decisions, Across Subject Areas (Continued)**

| | Model B4 | | | Model b5 | | |
|---|---|---|---|---|---|---|
| | RTA | WTO | RTA & WTO | RTA | WTO | RTA & WTO |
| # RTA Decisions $_{i\,t-1}$ X Sector Exports $_{ij\,s\,t-1}$ / GDP $_{i\,t-1}$ | -0.00701** | -0.186*** | -0.0438 | | | |
| | (0.00390) | (0.0556) | (0.0346) | | | |
| # RTA Decisions $_{i\,t-1}$ X Power $_{ij\,t-1}$ | | | | 0.027*** | 0.304*** | -0.094** |
| | | | | (0.0097) | (0.101) | (0.048) |
| # RTA Decisions $_{i\,t-1}$ | -0.0537 | -2.085*** | -0.423 | 0.074*** | 0.609*** | 0.058 |
| | (0.0623) | (0.612) | (0.469) | (0.022) | (0.241) | (0.107) |
| # WTO Decisions $_{i\,t-1}$ | -0.153 | -0.628*** | 0.0430 | -0.191 | -0.665*** | 0.179 |
| | (0.177) | (0.192) | (0.154) | (0.167) | (0.222) | (0.1496) |
| # RTA Disputes $_{i\,s\,t-1}$ | 0.177** | -0.0495 | 0.154* | 0.179** | -0.151 | 0.138 |
| | (0.0862) | (0.200) | (0.105) | (0.088) | (0.178) | (0.112) |

| | | | | | | |
|---|---|---|---|---|---|---|
| # WTO Disputes $_{i\ s\ t-1}$ | 0.288* | 1.298** | -0.00769 | 0.272 | 1.133** | 0.117 |
| | (0.209) | (0.561) | (0.557) | (0.216) | (0.511) | (0.635) |
| # Third Party $_{i\ t-1}$ | -0.0692*** | 0.0398 | -0.0476 | -0.069*** | 0.061 | -0.094 |
| | (0.0292) | (0.0869) | (0.118) | (0.029) | (0.077) | (0.140) |
| Power $_{ij\ t-1}$ | -0.0258 | -0.558 | 1.644*** | -0.094 | -0.598 | 1.782*** |
| | (0.0932) | (1.083) | (0.620) | (0.096) | (1.076) | (0.651) |
| GDPpc $_{i\ t-1}$ | -0.178 | 1.570* | -1.622** | -0.225* | 1.376* | -1.697** |
| | (0.151) | (1.025) | (0.928) | (0.162) | (0.912) | (0.912) |
| GDPpc $_{j\ t-1}$ | 0.382*** | 3.622*** | 0.247 | 0.4297*** | 3.739*** | 0.057 |
| | (0.119) | (1.143) | (0.301) | (0.131) | (1.197) | (0.296) |
| Sector Exports $_{ij\ s\ t-1}$ / Total Exports $_{ij\ t-1}$ | 0.248*** | -1.037** | -1.227*** | 0.245** | -1.159** | -1.266*** |
| | (0.104) | (0.581) | (0.393) | (0.108) | (0.532) | (0.387) |
| Sector Exports $_{ij\ s\ t-1}$ / GDP $_{i\ t-1}$ | 0.269*** | 0.995** | 1.825*** | 0.236*** | 0.766* | 1.734*** |
| | (0.0781) | (0.520) | (0.229) | (0.073) | (0.481) | (0.251) |
| Trade/GDP $_{i\ t-1}$ | -0.850*** | -2.945** | -0.135 | -0.901*** | -1.996 | -0.3295 |
| | (0.213) | (1.720) | (1.417) | (0.216) | (1.853) | (1.581) |
| Polity2 $_{i\ t-1}$ | -0.0862** | -0.409 | 0.740* | -0.077* | -0.4498* | 0.781** |
| | (0.0478) | (0.348) | (0.472) | (0.048) | (0.326) | (0.472) |
| Polity2 $_{j\ t-1}$ | 0.0229 | -1.054*** | -0.614*** | 0.020 | -1.147*** | -0.557*** |
| | (0.0438) | (0.308) | (0.152) | (0.043) | (0.361) | (0.158) |
| RTA Dispute $_{ij\ s\ t-1}$ | 1.183*** | 1.883*** | 3.121*** | 1.170*** | 1.853*** | 3.027*** |
| | (0.237) | (0.771) | (0.685) | (0.2399) | (0.702) | (0.682) |
| WTO Dispute $_{ij\ s\ t-1}$ | 1.487** | 2.930** | 4.662*** | 1.477** | 2.861*** | 4.636*** |
| | (0.822) | (1.273) | (1.049) | (0.824) | (1.147) | (1.068) |
| Both Forum Disputes $_{ij\ s\ t-1}$ | 3.383*** | 4.433*** | 4.741*** | 3.416*** | 4.276*** | 4.913*** |
| | (0.862) | (1.043) | (1.709) | (0.868) | (1.225) | (1.603) |
| t | -0.195** | 7.276*** | -3.432** | -0.192** | 5.4999*** | -3.306** |
| | (0.0860) | (0.860) | (2.070) | (0.085) | (0.913) | (1.990) |
| $t^2$ | 0.0185** | -8.783*** | 1.409* | 0.018** | -6.944*** | 1.367* |
| | (0.00992) | (0.482) | (0.912) | (0.0099) | (0.4897) | (0.8599) |
| $t^3$ | -0.000426* | 0.327*** | -0.144* | -0.0004* | 0.259*** | -0.141* |
| | (0.000285) | (0.0178) | (0.101) | (0.0003) | (0.018) | (0.095) |
| Andean Community | 0.220 | -47.94*** | -31.90*** | 0.182 | -22.612*** | -29.436*** |
| | (0.468) | (11.62) | (5.132) | (0.468) | (3.976) | (2.464) |
| Mercosur | 0.938*** | 2.937** | -2.671** | 0.906*** | 3.145** | -3.018** |
| | (0.324) | (1.277) | (1.319) | (0.333) | (1.455) | (1.307) |
| Central American Common Market | -0.793* | -9.140** | -23.17*** | -0.732* | -7.647** | -20.45*** |
| | (0.550) | (4.866) | (1.733) | (0.5496) | (3.857) | (1.628) |
| Constant | 3.295* | -23.11** | 29.98*** | 2.894 | -27.916** | 31.582*** |
| | (2.420) | (12.91) | (8.998) | (2.451) | (13.216) | (10.199) |
| Observations | 3,661 | 3,661 | 3,661 | 3,661 | 3,661 | 3,661 |
| Pseudo R-Squared | 0.333 | 0.333 | 0.333 | 0.335 | 0.335 | 0.335 |

Robust standard errors in parentheses. Adjusted for 58 clusters in dyad. Significance levels based on one-tailed hypothesis test. *** p< 0.01, ** p< 0.05, * p < 0.10

**Table A.2.6: Conditional Effect of Previous Panel Decisions in NAFTA Disputes, Across Subject Areas**

| | Model A6 | | | Model A7 | | |
|---|---|---|---|---|---|---|
| | RTA | WTO | RTA & WTO | RTA | WTO | RTA & WTO |

| | | | | | | |
|---|---|---|---|---|---|---|
| # Affirm Decisions $_{i\ t-1}$ | 3.804*** | 15.61** | 14.24** | 0.611* | 0.540* | 0.997** |
| | (1.335) | (8.286) | (6.661) | (0.387) | (0.342) | (0.472) |
| # Affirm Decisions $_{i\ t-1}$ X GDP pc $_{i\ t-1}$ | -0.336*** | -1.436** | -1.340** | | | |
| | (0.140) | (0.777) | (0.651) | | | |
| # Affirm Decisions $_{i\ t-1}$ X Sector Exports $_{ij\ s\ t-1}$ / Total Exports $_{ij\ t-1}$ | | | | 0.122* | -0.0250 | 0.211 |
| | | | | (0.0843) | (0.133) | (0.315) |
| # Mixed Decisions $_{i\ t-1}$ | -2.931*** | -36.26*** | -7.024 | -0.381** | 0.187 | -1.078 |
| | (1.129) | (11.32) | (8.232) | (0.229) | (0.392) | (0.916) |
| # Mixed Decisions $_{i\ t-1}$ X GDP pc $_{i\ t-1}$ | 0.279*** | 3.479*** | 0.700 | | | |
| | (0.107) | (1.060) | (0.770) | | | |
| # Mixed Decisions $_{i\ t-1}$ X Sector Exports $_{ij\ s\ t-1}$ / Total Exports $_{ij\ t-1}$ | | | | -0.185 | 0.0774 | -0.580** |
| | | | | (0.161) | (0.0654) | (0.337) |
| # Remand Decisions $_{i\ t-1}$ | -0.418 | 7.267 | 17.84*** | 0.262 | 0.242 | 0.148 |
| | (2.396) | (5.918) | (0.927) | (0.297) | (0.354) | (0.780) |
| # Remand Decisions $_{i\ t-1}$ X GDP pc $_{i\ t-1}$ | 0.0581 | -0.606 | -1.707*** | | | |
| | (0.239) | (0.584) | (0.0716) | | | |
| # Remand Decisions $_{i\ t-1}$ X Sector Exports $_{ij\ s\ t-1}$ / Total Exports $_{ij\ t-1}$ | | | | 0.0664 | -0.138 | 0.0603 |
| | | | | (0.170) | (0.116) | (0.157) |
| # NAFTA Disputes $_{i\ s\ t-1}$ | 0.235*** | -0.263*** | -0.101 | 0.262*** | -0.116 | 0.0531 |
| | (0.0751) | (0.0919) | (0.0895) | (0.0925) | (0.103) | (0.0487) |
| # WTO Disputes $_{i\ s\ t-1}$ | 0.232 | 1.694** | 0.364 | 0.324 | 1.389** | 0.935** |
| | (0.293) | (0.731) | (0.339) | (0.293) | (0.791) | (0.552) |
| # Third Party $_{i\ t-1}$ | -0.0293 | -0.284* | -0.219* | -0.0325** | -0.121 | -0.0713 |
| | (0.0491) | (0.206) | (0.145) | (0.0193) | (0.128) | (0.170) |
| Power $_{ij\ t-1}$ | 0.201 | -11.00** | -1.400 | 0.219 | -8.558* | -2.322 |
| | (2.204) | (6.355) | (7.085) | (2.330) | (5.283) | (4.283) |
| GDPpc $_{i\ t-1}$ | -0.196 | 3.626* | -4.686* | -0.0286 | 4.802** | -5.250 |
| | (0.278) | (2.544) | (3.118) | (0.449) | (2.195) | (4.143) |
| GDPpc $_{j\ t-1}$ | 0.241 | 7.556*** | -0.522 | 0.173 | 4.879** | 0.126 |
| | (0.361) | (0.442) | (1.271) | (0.273) | (2.482) | (1.293) |
| Sector Exports $_{ij\ s\ t-1}$ / Total Exports $_{ij\ t-1}$ | 0.110 | 4.957* | -0.151 | 0.0549 | 2.887 | 1.519* |
| | (1.071) | (3.208) | (3.391) | (1.062) | (3.504) | (1.092) |
| Sector Exports $_{ij\ s\ t-1}$ / GDP $_{i\ t-1}$ | 0.304 | -5.695* | 0.861 | 0.345 | -3.399 | -0.116 |
| | (1.182) | (3.481) | (3.928) | (1.244) | (3.460) | (1.946) |
| Trade/GDP $_{i\ t-1}$ | 0.642 | -12.40** | -6.350 | 0.810 | -11.27** | -6.141* |
| | (2.262) | (6.469) | (5.444) | (2.368) | (6.018) | (4.113) |
| Polity2 $_{i\ t-1}$ | -0.221 | 0.841*** | 3.810*** | -0.290** | -0.291 | 4.025** |
| | (0.224) | (0.184) | (1.016) | (0.168) | (0.381) | (2.417) |
| Polity2 $_{i\ t-1}$ | -0.171 | -1.188** | -0.264 | -0.165 | -0.830*** | -0.227 |
| | (0.374) | (0.679) | (1.247) | (0.363) | (0.353) | (0.838) |

| | | | | | | |
|---|---|---|---|---|---|---|
| NAFTA Dispute $_{ij\ s\ t-1}$ | 2.307** | 2.310* | 3.951** | 2.237** | 1.727 | 3.702** |
| | (1.249) | (1.786) | (1.972) | (1.040) | (1.402) | (1.888) |
| WTO Dispute $_{ij\ s\ t-1}$ | 2.334*** | 2.575 | 6.239*** | 2.254*** | 2.626** | 6.619*** |
| | (0.476) | (2.125) | (2.130) | (0.525) | (1.574) | (2.541) |
| Both Forum Disputes $_{ij\ s\ t-1}$ | 3.802*** | 5.201*** | 6.035* | 3.783*** | 4.532*** | 5.314** |
| | (1.344) | (0.628) | (3.838) | (1.389) | (0.418) | (3.161) |
| t | -0.0517 | 7.890*** | -4.429* | 0.0284 | 7.255*** | -3.817* |
| | (0.318) | (1.047) | (3.419) | (0.292) | (1.386) | (2.974) |
| $t^2$ | -0.130 | -9.771*** | 2.047* | -0.143 | -8.784*** | 1.523 |
| | (0.216) | (0.996) | (1.582) | (0.210) | (1.432) | (1.216) |
| $t^3$ | 0.00747 | 0.701*** | -0.217 | 0.00820 | 0.629*** | -0.146 |
| | (0.0191) | (0.0703) | (0.190) | (0.0178) | (0.103) | (0.133) |
| Constant | 1.704 | -139.2*** | 45.15 | 0.987 | -94.93* | 30.85 |
| | (12.74) | (54.12) | (56.54) | (14.00) | (68.50) | (34.81) |
| Observations | 450 | 450 | 450 | 450 | 450 | 450 |
| Pseudo R-squared | 0.375 | 0.375 | 0.375 | 0.367 | 0.367 | 0.367 |

Robust standard errors in parentheses. Adjusted for 3 clusters in ccode1. Significance levels based on one-tailed hypothesis test. *** p< 0.01, ** p< 0.05, * p < 0.10

**Table A.2.7: Conditional Effect of Previous Panel Decisions in NAFTA Disputes, Across Subject Areas (Continued)**

| | Model B8 | | | Model B9 | | |
|---|---|---|---|---|---|---|
| | RTA | WTO | RTA & WTO | RTA | WTO | RTA & WTO |
| # Affirm Decisions $_{i\ t-1}$ | -0.951 | 1.133 | 4.062** | 0.780** | 0.801*** | 0.250 |
| | (1.718) | (3.809) | (2.367) | (0.380) | (0.274) | (0.239) |
| # Affirm Decisions $_{i\ t-1}$ X Sector Exports $_{ij\ s\ t-1}$ / GDP $_{i\ t-1}$ | -0.116 | 0.0237 | 0.283* | | | |
| | (0.137) | (0.266) | (0.197) | | | |
| # Affirm Decisions $_{i\ t-1}$ X Power $_{ij\ t-1}$ | | | | 0.283 | -0.0947 | -0.503** |
| | | | | (0.242) | (0.491) | (0.262) |
| # Mixed Decisions $_{i\ t-1}$ | -1.940*** | -7.682** | -7.795*** | 0.0550 | 0.376*** | 0.569** |
| | (0.602) | (4.307) | (2.266) | (0.0532) | (0.124) | (0.274) |
| # Mixed Decisions $_{i\ t-1}$ X Sector Exports $_{ij\ s\ t-1}$ / GDP $_{i\ t-1}$ | -0.147*** | -0.557** | -0.622*** | | | |
| | (0.0474) | (0.295) | (0.162) | | | |
| # Mixed Decisions $_{i\ t-1}$ X Power $_{ij\ t-1}$ | | | | 0.182** | 0.991** | 0.854** |
| | | | | (0.0984) | (0.545) | (0.448) |
| # Remand Decisions $_{i\ t-1}$ | 0.0134 | 1.450 | 3.747** | 0.196** | 0.853*** | -0.493* |
| | (1.368) | (2.056) | (1.994) | (0.0900) | (0.332) | (0.301) |
| # Remand Decisions $_{i\ t-1}$ X Sector Exports $_{ij\ s\ t-1}$ / GDP $_{i\ t-1}$ | -0.00950 | 0.0463 | 0.303** | | | |
| | (0.105) | (0.155) | (0.142) | | | |
| # Remand Decisions $_{i\ t-1}$ X Power $_{ij\ t-1}$ | | | | 0.141 | -0.166 | -1.022*** |
| | | | | (0.150) | (0.257) | (0.144) |

| | | | | | | |
|---|---|---|---|---|---|---|
| # NAFTA Disputes $_{i\ s\ t-1}$ | 0.280*** | 0.0196 | 0.0260 | 0.285*** | -0.136** | -0.142* |
| | (0.104) | (0.0900) | (0.0546) | (0.112) | (0.0828) | (0.0920) |
| # WTO Disputes $_{i\ s\ t-1}$ | 0.334 | 1.558*** | 0.563 | 0.257 | 1.406** | 0.441 |
| | (0.317) | (0.557) | (0.516) | (0.329) | (0.671) | (0.393) |
| # Third Party $_{i\ t-1}$ | 0.00286 | -0.119 | -0.142 | 0.0378 | -0.188 | -0.284 |
| | (0.0664) | (0.203) | (0.200) | (0.0641) | (0.219) | (0.231) |
| Power $_{ij\ t-1}$ | 0.328 | -9.064** | -2.660 | -0.639 | -10.06** | -3.873 |
| | (2.054) | (5.452) | (5.073) | (1.798) | (5.340) | (6.546) |
| GDPpc $_{i\ t-1}$ | -0.169 | 4.332** | -8.193*** | 0.164 | 3.881** | -4.914** |
| | (0.365) | (2.468) | (3.213) | (0.344) | (2.274) | (2.312) |
| GDPpc $_{j\ t-1}$ | -0.105 | 5.717*** | -0.611 | -0.0235 | 6.571*** | -1.248* |
| | (0.198) | (1.520) | (1.019) | (0.175) | (1.237) | (0.863) |
| Sector Exports $_{ij\ s\ t-1}$ / Total Exports $_{ij\ t-1}$ | 0.0805 | 3.164 | 0.918 | 0.388 | 4.108* | 1.355 |
| | (0.998) | (3.237) | (2.006) | (0.959) | (2.783) | (2.296) |
| Sector Exports $_{ij\ s\ t-1}$ / GDP $_{i\ t-1}$ | 0.550 | -3.581 | 0.356 | 0.00675 | -4.787* | -0.571 |
| | (1.208) | (3.220) | (2.531) | (1.057) | (3.015) | (2.970) |
| Trade/GDP $_{i\ t-1}$ | 0.990 | -11.68** | -8.913** | 0.845 | -11.09** | -8.949* |
| | (2.310) | (5.856) | (4.788) | (2.522) | (6.323) | (6.687) |
| Polity2 $_{i\ t-1}$ | -0.285* | -0.0507 | 6.098*** | -0.329* | 0.326* | 4.050*** |
| | (0.212) | (0.238) | (1.682) | (0.210) | (0.208) | (0.487) |
| Polity2 $_{j\ t-1}$ | 0.0322 | -0.907*** | -0.0129 | 0.0292 | -1.013*** | 0.318 |
| | (0.0963) | (0.250) | (0.782) | (0.127) | (0.283) | (0.778) |
| NAFTA Dispute $_{ij\ s\ t-1}$ | 2.300** | 2.049* | 3.584** | 2.316** | 2.104* | 3.521** |
| | (1.177) | (1.363) | (1.714) | (1.262) | (1.494) | (1.677) |
| WTO Dispute $_{ij\ s\ t-1}$ | 2.429*** | 2.874** | 6.981*** | 2.351*** | 2.852* | 6.466*** |
| | (0.392) | (1.710) | (2.012) | (0.525) | (1.813) | (1.772) |
| Both Forum Disputes $_{ij\ s\ t-1}$ | 3.780*** | 4.860*** | 5.144* | 3.794*** | 4.944*** | 5.755** |
| | (1.489) | (0.631) | (3.403) | (1.586) | (0.850) | (3.368) |
| t | -0.129 | 7.221*** | -3.875 | -0.182 | 7.544*** | -3.544 |
| | (0.452) | (1.331) | (3.076) | (0.460) | (1.457) | (3.156) |
| $t^2$ | -0.0814 | -8.997*** | 1.640* | -0.0893 | -9.325*** | 1.570 |
| | (0.314) | (1.373) | (1.275) | (0.321) | (1.132) | (1.407) |
| $t^3$ | 0.00215 | 0.647*** | -0.152 | 0.00366 | 0.669*** | -0.156 |
| | (0.0356) | (0.0991) | (0.142) | (0.0349) | (0.0793) | (0.165) |
| Constant | 4.977 | -101.4** | 60.12** | -5.480 | -123.7*** | 39.71 |
| | (14.03) | (59.38) | (35.39) | (10.94) | (51.04) | (40.75) |
| Observations | 450 | 450 | 450 | 450 | 450 | 450 |
| Pseudo R-squared | 0.381 | 0.381 | 0.381 | 0.379 | 0.379 | 0.379 |

Robust standard errors in parentheses. Adjusted for 3 clusters in ccode1. Significance levels based on one-tailed hypothesis test. *** p< 0.01, ** p< 0.05, * p < 0.10

**Table A.2.8: Stratified Cox Models**

| | Model 10 | Model 11 | Model 12 | Model 13 |
|---|---|---|---|---|
| # Regional Decisions $_{ijst-1}$ | 0.231*** | | 0.275*** | |
| | (0.032) | | (0.048) | |
| # Regional Decisions $_{ijs\ \Sigma(t-1,\ t-5)}$ | | 0.075*** | | 0.059*** |
| | | (0.011) | | (0.022) |
| # Regional Disputes $_{ijst-1}$ | 0.021** | 0.024*** | 0.062*** | 0.063*** |
| | (0.009) | (0.0098) | (0.020) | (0.021) |
| # WTO Decisions $_{ijst-1}$ | -0.046 | | 0.4497 | |
| | (0.228) | | (0.5059) | |
| # WTO Decisions $_{ijs\ \Sigma(t-1,\ t-5)}$ | | -0.103 | | -0.1799 |
| | | (0.088) | | (0.272) |
| # WTO Disputes $_{ijst-1}$ | -0.918 | -0.724 | 1.363* | 1.217* |
| | (0.725) | (0.703) | (0.899) | (0.892) |
| # Third Party | -0.076*** | -0.039** | -0.347*** | -0.297*** |
| | (0.027) | (0.023) | (0.103) | (0.096) |
| Power | 0.071 | 0.045 | -0.243 | -0.270* |
| | (0.094) | (0.092) | (0.203) | (0.208) |
| Ln GDP pc $_{it-1}$ | -0.208** | -0.229** | -0.014 | -0.002 |
| | (0.113) | (0.116) | (0.257) | (0.260) |
| Ln GDP pc $_{jt-1}$ | 0.262*** | 0.266*** | 0.0498 | -0.042 |
| | (0.101) | (0.104) | (0.171) | (0.182) |
| Ln Sector Exports $_{ij\ t-1}$/GDP$_{i\ t-1}$ | 0.262*** | 0.255*** | 0.278** | 0.286** |
| | (0.068) | (0.063) | (0.155) | (0.152) |
| Ln Total Trade/ GDP $_{i\ t-1}$ | -0.498*** | -0.546*** | -2.267*** | -2.312*** |
| | (0.212) | (0.197) | (0.448) | (0.459) |
| Sector Exports $_{ij\ t-1}$/ Total Exports $_{ij\ t-1}$ | 0.081 | 0.108 | 0.271** | 0.271** |
| | (0.096) | (0.0896) | (0.156) | (0.144) |
| Polity 2 $_{it-1}$ | -0.040 | -0.005 | -0.086* | -0.095* |
| | (0.037) | (0.037) | (0.060) | (0.067) |
| Polity 2 $_{jt-1}$ | 0.083** | 0.085** | 0.018 | 0.012 |
| | (0.041) | (0.041) | (0.071) | (0.087) |
| RTA Dispute $_{ijst-1}$ | 0.744*** | 0.613*** | 1.294*** | 1.300*** |
| | (0.151) | (0.164) | (0.301) | (0.319) |
| WTO Dispute $_{ijst-1}$ | 1.301*** | 1.563*** | 4.9097*** | 4.802*** |
| | (0.417) | (0.348) | (0.677) | (0.644) |
| Both Dispute $_{ijst-1}$ | 1.858*** | 1.829*** | 3.404*** | 4.136*** |
| | (0.381) | (0.372) | (0.494) | (0.407) |
| CAN | -0.023 | -0.059 | -0.258 | -0.039 |
| | (0.477) | (0.471) | (0.813) | (0.831) |
| MERC | 0.757** | 0.842** | 0.7798 | 0.820 |
| | (0.412) | (0.429) | (0.693) | (0.750) |
| CACM | -0.481 | -0.297 | -0.6399 | -0.482 |
| | (0.5095) | (0.484) | (0.748) | (0.796) |
| Observations | 3,916 | 3,916 | 3,916 | 3,916 |
| Wald $\chi^2$ | 709.33 | 752.35 | 1368.90 | 1294.97 |
| Prob > $\chi^2$ | 0.000 | 0.000 | 0.000 | 0.000 |

## A.2.2 MARGINAL EFFECTS TABLES

**Table A.2.9: Conditional Marginal Effects of Number of Regional Decisions Issued Against in Same Subject Area (Models in Tables 5.2 and 5.3)**

| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
|---|---|---|---|---|---|
| All Variables at Means | **0.01026*** ** | **0.01026*** ** | **0.01159*** ** | **0.00998*** ** | **0.0095*** ** |
| | **(0.00199)** | **(0.00201)** | **(0.001999)** | **(0.00187)** | **(0.00196)** |
| Level of Development | | | | | |
| Minimum | | **0.01414*** ** | | | |
| | | **(0.00438)** | | | |

| | | | | | |
|---|---|---|---|---|---|
| | 1 SD Below | **0.01269*** ** | | | |
| | | **(0.00301)** | | | |
| | Mean | **0.01073*** ** | | | |
| | | **(0.00201)** | | | |
| | 1 SD Above | **0.00904*** ** | | | |
| | | **(0.00238)** | | | |
| | 2 SD Above | **0.0076*** ** | | | |
| | | **(0.0031)** | | | |
| | 3 SD Above | **0.00637** ** | | | |
| | | **(0.00369)** | | | |
| | Maximum | **0.00608* ** | | | |
| | | **(0.003814)** | | | |
| Ratio of Sector Exports/Total Exports | | | | | |
| | Minimum | | 0.00202 | | |
| | | | (0.00235) | | |
| | 6 SD Below | | 0.00225 | | |
| | | | (0.00248) | | |
| | 5 SD Below | | 0.00314 | | |
| | | | (0.00288) | | |
| | 4 SD Below | | **0.00432* ** | | |
| | | | **(0.00318)** | | |
| | 3 SD Below | | **0.00583** ** | | |
| | | | **(0.00325)** | | |
| | 2 SD Below | | **0.00766*** ** | | |
| | | | **(0.00299)** | | |
| | 1 SD Below | | **0.00969*** ** | | |
| | | | **(0.00237)** | | |
| | Mean | | **0.01158*** ** | | |
| | | | **(0.001997)** | | |
| | 1 SD Above | | **0.01261*** ** | | |
| | | | **(0.00324)** | | |
| | Maximum | | **0.01245*** ** | | |
| | | | **(0.00454)** | | |
| Ratio of Sector Exports/GDP | | | | | |
| | Minimum | | | **0.00123* ** | |
| | | | | **(0.00086)** | |
| | 1 SD Below | | | **0.00539*** ** | |
| | | | | **(0.00130)** | |
| | Mean | | | **0.01333** ** | |
| | | | | **(0.00754)** | |
| | 1 SD Above | | | -0.03278 | |
| | | | | (0.038196) | |
| | Maximum | | | -0.03808 | |
| | | | | (0.039182) | |
| Power | | | | | |
| | Minimum | | | | 0.00192 |
| | | | | | (0.0055) |

| | |
|---|---|
| 3 SD Below | 0.00328 |
| | (0.00478) |
| 2 SD Below | **0.0055*** |
| | **(0.0036)** |
| 1 SD Below | **0.00761***** |
| | **(0.00255)** |
| Mean | **0.00957***** |
| | **(0.00196)** |
| Maximum | **0.0114***** |
| | **(0.0025)** |

Note: Marginal Effects are calculated with all variables at their means unless otherwise noted. Learning capacity levels are determined by mean and standard deviation of the natural log of each variable. Robust standard errors in parentheses. P values are calculated for a one-tailed hypothesis test. *p < 0.10, **p < 0.05, ***p < 0.01

**Table A.2.10: Conditional Marginal Effects of Number of Regional Decisions Issued in Previous Five Years, Same Subject Area (Models in Tables A.2.1 and A.2.2)**

| | Cumulative Model 1 | Cumulative Model 2 | Cumulative Model 3 | Cumulative Model 4 | Cumulative Model 5 |
|---|---|---|---|---|---|
| All Variables at Mean | **0.0025*** ** | **0.0024*** ** | **0.0026*** ** | **0.0023*** ** | **0.0024*** ** |
| | **(0.0005)** | **(0.0005)** | **(0.0005)** | **(0.0005)** | **(0.0005)** |
| Level of Development | | | | | |
| Minimum | | **0.004*** ** | | | |
| | | **(0.001)** | | | |
| 1 SD Below | | **0.0034*** ** | | | |
| | | **(0.0008)** | | | |
| Mean | | **0.0026*** ** | | | |
| | | **(0.0005)** | | | |
| 1 SD Above | | **0.002*** ** | | | |
| | | **(0.0006)** | | | |
| 2 SD Above | | **0.001** ** | | | |
| | | **(0.0008)** | | | |
| 3 SD Above | | 0.001 | | | |
| | | (0.001) | | | |
| Maximum | | 0.001 | | | |
| | | (0.001) | | | |
| Ratio Sector Exports/Total Exports | | | | | |
| Minimum | | | 0.0003 | | |
| | | | (0.0004) | | |
| 6 SD Below | | | 0.0004 | | |
| | | | (0.0004) | | |
| 5 SD Below | | | 0.0005 | | |
| | | | (0.0005) | | |
| 4 SD Below | | | **0.0008*** | | |
| | | | **(0.0005)** | | |
| 3 SD Below | | | **0.0011** ** | | |
| | | | **(0.0006)** | | |

| | | | | | |
|---|---|---|---|---|---|
| | 2 SD Below | **0.0015*** ** | | | |
| | | **(0.0005)** | | | |
| | 1 SD Below | **0.002*** ** | | | |
| | | **(0.0005)** | | | |
| | Mean | **0.003*** ** | | | |
| | | **(0.0005)** | | | |
| | 1 SD Above | **0.003*** ** | | | |
| | | **(0.001)** | | | |
| | Maximum | **0.003*** ** | | | |
| | | **(0.001)** | | | |
| Ratio of Sector Exports/GDP | | | | | |
| | Minimum | | **0.00039*** | | |
| | | | **(0.00027)** | | |
| | 1 SD Below | | **0.0014*** ** | | |
| | | | **(0.00039)** | | |
| | Mean | | **0.0031** ** | | |
| | | | **(0.0015)** | | |
| | 1 SD Above | | -0.005 | | |
| | | | (0.011) | | |
| | Maximum | | -0.011 | | |
| | | | (0.010) | | |
| Power | | | | | |
| | Minimum | | | **0.0021*** | |
| | | | | **(0.0017)** | |
| | 3 SD Below | | | **0.002*** | |
| | | | | **(0.001)** | |
| | 2 SD Below | | | **0.0023** ** | |
| | | | | **(0.001)** | |
| | 1 SD Below | | | **0.0023*** ** | |
| | | | | **(0.0007)** | |
| | Mean | | | **0.0024*** ** | |
| | | | | **(0.0005)** | |
| | Maximum | | | **0.0024*** ** | |
| | | | | **(0.0005)** | |

Note: Marginal Effects are calculated with all variables at their means unless otherwise noted. Learning capacity levels are determined by mean and standard deviation of the natural log of each variable. Robust standard errors in parentheses. P values are calculated for a one-tailed hypothesis test. *p < 0.10, **p < 0.05, ***p < 0.01

**Table A.2.11: Conditional Marginal Effects of Number of Regional Decisions Issued Against Across Subject Areas (Models in Table A.2.3 and A.2.4)**

| | Model A1 | Model A2 | Model A3 | Model A4 | Model A5 |
|---|---|---|---|---|---|
| All Variables at Mean | **0.00187*** ** | **0.00220*** ** | **0.00181*** ** | **0.00188*** ** | **0.0017*** ** |
| | **(0.00081)** | **(0.00083)** | **(0.00073)** | **(0.00075)** | **(0.0007)** |
| Level of Development | | | | | |

| | |
|---|---|
| Minimum | 0.00105 |
| | (0.00144) |
| 1 SD Below | **0.00152*** |
| | **(0.00105)** |
| Mean | **0.00209***** |
| | **(0.00082)** |
| 1 SD Above | **0.00249***** |
| | **(0.00091)** |
| 2 SD Above | **0.002761***** |
| | **(0.00110)** |
| 3 SD Above | **0.00292**** |
| | **(0.00132)** |
| Maximum | **0.00295**** |
| | **(0.00138)** |

Ratio Sector Exports/Total Exports

| | |
|---|---|
| Minimum | 0.00007 |
| | (0.00016) |
| 6 SD Below | 0.00009 |
| | (0.00017) |
| 5 SD Below | 0.00015 |
| | (0.00023) |
| 4 SD Below | 0.00025 |
| | (0.00028) |
| 3 SD Below | 0.000415 |
| | (0.00034) |
| 2 SD Below | **0.00069**** |
| | **(0.00038)** |
| 1 SD Below | **0.00112***** |
| | **(0.00046)** |
| Mean | **0.0018***** |
| | **(0.00073)** |
| 1 SD Above | **0.00284**** |
| | **(0.00147)** |
| Maximum | **0.00352**** |
| | **(0.00207)** |

Ratio of Sector Exports/GDP

| | |
|---|---|
| Minimum | **0.00044*** |
| | **(0.000296)** |
| 1 SD Below | **0.00129***** |
| | **(0.00042)** |
| Mean | 0.001816 |
| | (0.00232) |
| 1 SD Above | -0.00749 |
| | (0.01254) |
| Maximum | -0.01421 |

| | | |
|---|---|---|
| | | (0.01413) |
| Power | | |
| | Minimum | **-0.00207*** |
| | | **(0.0016)** |
| | 3 SD Below | -0.0015 |
| | | (0.0014) |
| | 2 SD Below | -0.00041 |
| | | (0.00109) |
| | 1 SD Below | 0.00068 |
| | | (0.0087) |
| | Mean | **0.0018***** |
| | | **(0.00074)** |
| | Maximum | **0.0029***** |
| | | **(0.00085)** |

Note: Marginal Effects are calculated with all variables at their means unless otherwise noted. Learning capacity levels are determined by mean and standard deviation of the natural log of each variable. Robust standard errors in parentheses. P values are calculated for a one-tailed hypothesis test. *p < 0.10, **p < 0.05, ***p < 0.01

**Table A.2.12: Conditional Marginal Effects of Number of Each Type of NAFTA Panel Decisions Issued Against in Same Subject Areas (Models in Tables 5.4 and 5.5)**

| | | Affirm | Mix | Remand |
|---|---|---|---|---|
| Level of Development | | | | |
| | Lowest | **0.150***** | **0.057*** | -0.027 |
| | | **(0.046)** | **(0.038)** | (0.022) |
| | Low | **0.112***** | **0.036**** | **-0.016*** |
| | | **(0.023)** | **(0.018)** | **(0.011)** |
| | Mean | **0.058**** | **0.011**** | -0.001 |
| | | **(0.035)** | **(0.006)** | (0.004) |
| | High | 0.021 | 0.004 | **0.007***** |
| | | (0.026) | (0.010) | **(0.003)** |
| | Highest | 0.018 | 0.003 | **0.007***** |
| | | (0.024) | (0.009) | **(0.003)** |
| Level of Sector/Total Exports | | | | |
| | Lowest | 0.071 | -0.039 | 0.024 |
| | | (0.251) | (0.162) | (0.081) |
| | Lower | 0.058 | -0.031 | 0.019 |
| | | (0.144) | (0.092) | (0.046) |
| | Low | 0.044 | -0.022 | 0.013 |
| | | (0.062) | (0.040) | (0.023) |
| | Mean | **0.031**** | -0.013 | 0.008 |
| | | **(0.014)** | (0.012) | (0.012) |
| | High | **0.019***** | **-0.005*** | 0.003 |
| | | **(0.004)** | **(0.004)** | (0.003) |
| | Highest | **0.010***** | 0.002 | 0.0002 |
| | | **(0.003)** | (0.007) | (0.007) |
| Level of Sector Exports/GDP | | | | |
| | Lowest | 0.0003 | -0.00007 | 0.00006 |
| | | (0.002) | (0.0006) | (0.0005) |
| | Low | 0.0007 | -0.0002 | 0.0001 |
| | | (0.004) | (0.0009) | (0.0007) |
| | Mean | -0.0005 | -0.0002 | -0.0007 |
| | | (0.007) | (0.004) | (0.001) |
| | High | **-0.018*** | 0.004 | **-0.004*** |

| | | | | |
|---|---|---|---|---|
| | | **(0.013)** | (0.196) | **(0.003)** |
| | Higher | -0.018 | **0.938*** ** | -0.013 |
| | | (0.016) | **(0.061)** | (0.035) |
| | Highest | -0.018 | **1.039*** ** | -0.013 |
| | | (0.018) | **(0.061)** | (0.039) |
| Level of Power | | | | |
| | Lowest | 0.049 | 0.044 | -0.005 |
| | | (0.225) | (0.0193) | (0.048) |
| | Low | 0.046 | 0.022 | -0.0007 |
| | | (0.148) | (0.073) | (0.027) |
| | Mean | **0.035** ** | 0.00002 | 0.003 |
| | | **(0.016)** | (0.002) | (0.008) |
| | Highest | 0.024 | -0.006 | 0.003 |
| | | (0.058) | (0.013) | (0.006) |

Note: Marginal Effects are calculated with all variables at their means unless otherwise noted. Learning capacity levels are determined by mean and standard deviation of the natural log of each variable. Robust standard errors in parentheses. P values are calculated for a one-tailed hypothesis test. *p < 0.10, **p < 0.05, ***p < 0.01

**Table A.2.13: Conditional Marginal Effects of Number of Each Type of NAFTA Panel Decisions Issued Against Across Subject Areas (Models in Table A.2.4 and A.2.5)**

| | | Affirm | Mix | Remand |
|---|---|---|---|---|
| Level of Development | | | | |
| | Lowest | **0.033*** ** | **-0.020*** ** | 0.0014 |
| | | **(0.009)** | **(0.004)** | (0.0141) |
| | Low | **0.027*** ** | **-0.015*** ** | 0.0034 |
| | | **(0.010)** | **(0.005)** | (0.0098) |
| | Mean | 0.016 | **-0.007** ** | 0.0044 |
| | | (0.013) | **(0.004)** | (0.0036) |
| | High | 0.007 | -0.0001 | **0.0051** ** |
| | | (0.013) | (0.0006) | **(0.0029)** |
| | Highest | 0.007 | 0.0003 | **0.0051*** |
| | | (0.013) | (0.0008) | **(0.0032)** |
| Level of Sector/Total Exports | | | | |
| | Lowest | -0.003 | 0.0194 | -0.0036 |
| | | (0.009) | (0.0665) | (0.0087) |
| | Lower | 0.0004 | 0.0145 | -0.0017 |
| | | (0.004) | (0.0319) | (0.0111) |
| | Low | 0.005 | 0.0084 | 0.00067 |
| | | (0.006) | (0.0101) | (0.010) |
| | Mean | 0.0096 | 0.0015 | **0.003*** |
| | | (0.008) | (0.0048) | **(0.002)** |
| | High | 0.015 | -0.0058 | 0.006 |
| | | (0.032) | (0.0106) | (0.014) |
| | Highest | 0.020 | -0.012 | 0.0086 |
| | | (0.065) | (0.0365) | (0.032) |
| Level of Sector Exports/GDP | | | | |
| | Lowest | 0.005 | 0.003 | 0.0009 |
| | | (0.029) | (0.020) | (0.003) |
| | Low | 0.007 | 0.004 | 0.001 |
| | | (0.029) | (0.017) | (0.003) |
| | Mean | **0.013*** | -0.0198 | 0.006 |
| | | **(0.009)** | (0.031) | (0.011) |
| | High | -0.112 | -0.204 | -0.013 |
| | | (0.698) | (0.424) | (0.339) |
| | Higher | -0.226 | -0.406 | -0.007 |

| | | | | |
|---|---|---|---|---|
| | | (1.052) | (2.89) | (0.342) |
| | Highest | -0.208 | -0.357 | -0.009 |
| | | (1.504) | (3.505) | (0.292) |
| Level of Power | | | | |
| | Lowest | -0.003 | -0.011 | -0.008 |
| | | (0.028) | (0.0098) | (0.064) |
| | Low | 0.003 | -0.009 | -0.004 |
| | | (0.014) | (0.029) | (0.009) |
| | Mean | 0.009 | -0.003 | 0.0003 |
| | | (0.007) | (0.004) | (0.002) |
| | Highest | 0.013 | 0.0008 | 0.003 |
| | | (0.025) | (0.002) | (0.005) |

Note: Marginal Effects are calculated with all variables at their means unless otherwise noted. Learning capacity levels are determined by mean and standard deviation of the natural log of each variable. Robust standard errors in parentheses. P values are calculated for a one-tailed hypothesis test. *p < 0.10, **p < 0.05, ***p < 0.01

**Table A.2.14: Conditional Marginal Effects of Number of Each Type of NAFTA Panel Decisions Issued Against Across Subject Areas (WTO Dispute Reference Group)**

| | | Affirm | Mix | Remand |
|---|---|---|---|---|
| Level of Development | | | | |
| | Lowest | **-0.005*** ** | -0.0006 | -0.016 |
| | | **(0.002)** | (0.008) | (0.016) |
| | Low | 0.010 | -0.0088 | **-0.018*** |
| | | (0.020) | (0.0126) | **(0.012)** |
| | Mean | **0.024*** | **-0.008** ** | 0.003 |
| | | **(0.016)** | **(0.004)** | (0.005) |
| | High | 0.015 | -0.001 | **0.006*** |
| | | (0.016) | (0.001) | **(0.004)** |
| | Highest | 0.015 | -0.001 | **0.006*** |
| | | (0.016) | (0.002) | **(0.005)** |
| Level of Sector/Total Exports | | | | |
| | Lowest | -0.005 | 0.031 | -0.011 |
| | | (0.008) | (0.070) | (0.011) |
| | Lower | 0.0008 | 0.022 | -0.008 |
| | | (0.006) | (0.032) | (0.010) |
| | Low | 0.008 | 0.013 | -0.003 |
| | | (0.007) | (0.011) | (0.011) |
| | Mean | **0.016** ** | 0.0019 | 0.001 |
| | | **(0.009)** | (0.005) | (0.004) |
| | High | 0.024 | -0.009 | 0.006 |
| | | (0.039) | (0.016) | (0.014) |
| | Highest | 0.025 | -0.017 | 0.010 |
| | | (0.061) | (0.039) | (0.033) |
| Level of Sector Exports/GDP | | | | |
| | Lowest | 0.000 | -0.000 | 0.000 |
| | | (0.000) | (0.000) | (0.000) |
| | Low | 0.000 | -0.00006 | 0.00003 |
| | | (0.000) | (0.0003) | (0.0002) |
| | Mean | 0.0297 | -0.039 | 0.006 |
| | | (0.024) | (0.054) | (0.019) |
| | High | -0.078 | -0.335 | 0.013 |
| | | (0.216) | (0.413) | (0.2499) |
| | Higher | -0.065 | -0.151 | 0.002 |
| | | (0.615) | (1.926) | (0.163) |
| | Highest | -0.0497 | -0.109 | 0.0002 |
| | | (0.537) | (1.594) | (0.132) |
| Level of Power | | | | |

| | | | |
|---|---|---|---|
| Lowest | -0.000 | 0.000 | -0.000 |
| | (0.000) | (0.000) | (0.000) |
| Low | -0.0004 | 0.0007 | -0.0006 |
| | (0.0007) | (0.001) | (0.0007) |
| Mean | **0.017**** | -0.005 | -0.0006 |
| | **(0.008)** | (0.005) | (0.004) |
| Highest | 0.021 | 0.004 | 0.003 |
| | (0.042) | (0.002) | (0.006) |

Note: Marginal Effects are calculated with all variables at their means unless otherwise noted. Learning capacity levels are determined by mean and standard deviation of the natural log of each variable. Robust standard errors in parentheses. P values are calculated for a one-tailed hypothesis test. Marginal effects calculated from model that matches models in chapter 4. The models are specified with "WTO Dispute Initiated" as the reference group and do not include cubic polynomial*p < 0.10, **p < 0.05, ***p < 0.0

# B.0 APPENDIX B: SUPPLEMENTAL FIGURES

## B.1 CHAPTER 4 SUPPLEMENTAL FIGURES

**Figure B.1.1: Marginal Effects of Previous Regional Dispute Experience of Each Additional Dispute, Across Subject Areas**

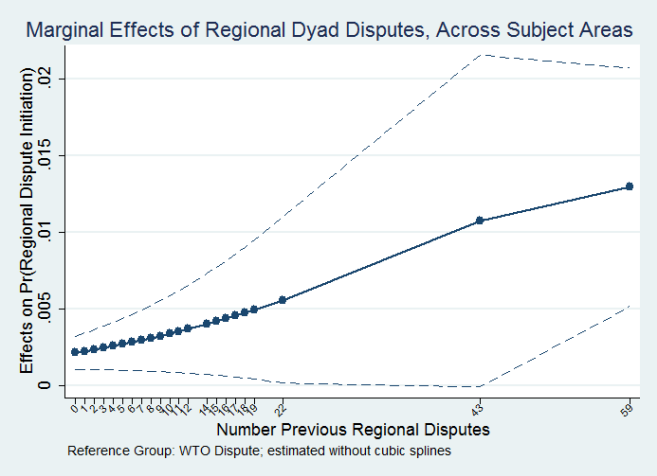
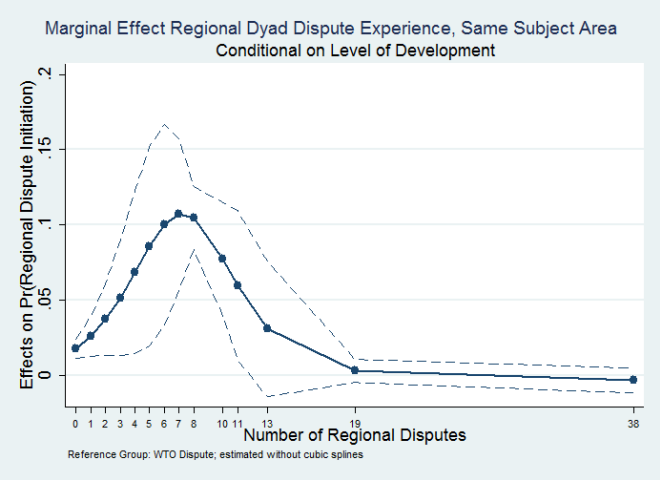
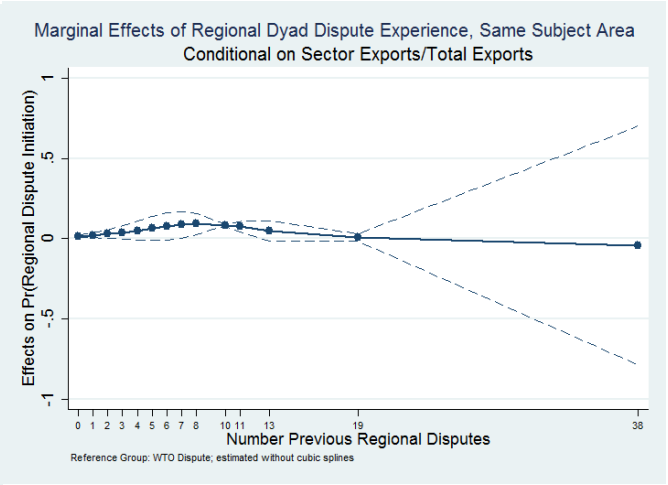



**Figure B.1.2: Marginal Effect of Previous Regional Dispute Experience of Each Additional Dispute, Conditional on Learning Capacity**



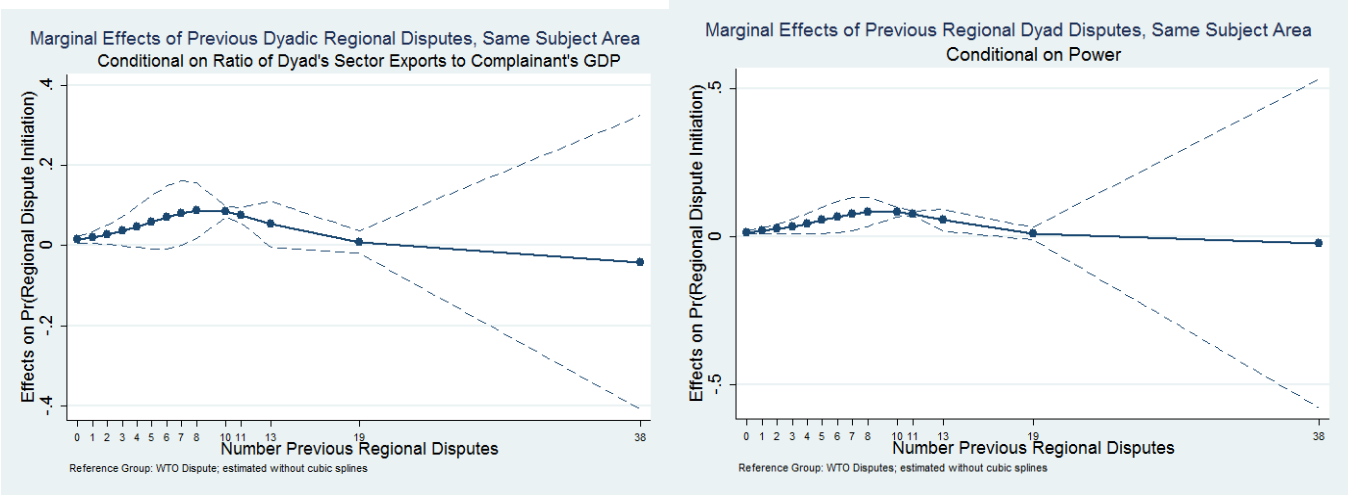



**Figure B.1.3: Marginal Effects of Previous Regional Dyad Disputes (5-Year Sum) Conditional on Learning Capacity, As Previous Experience Increases**

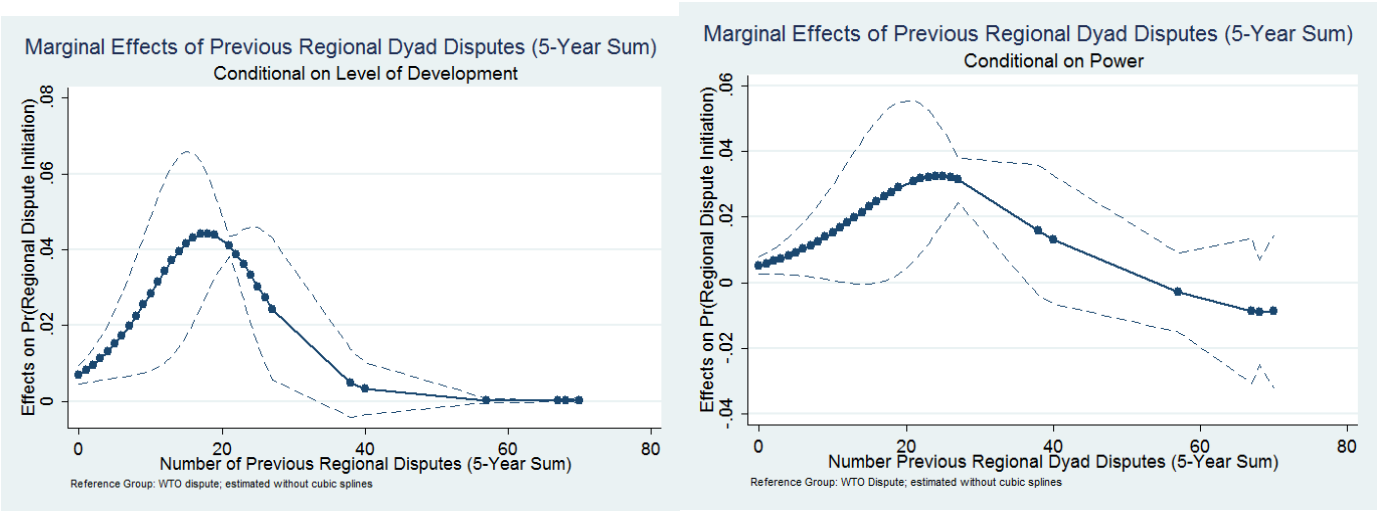
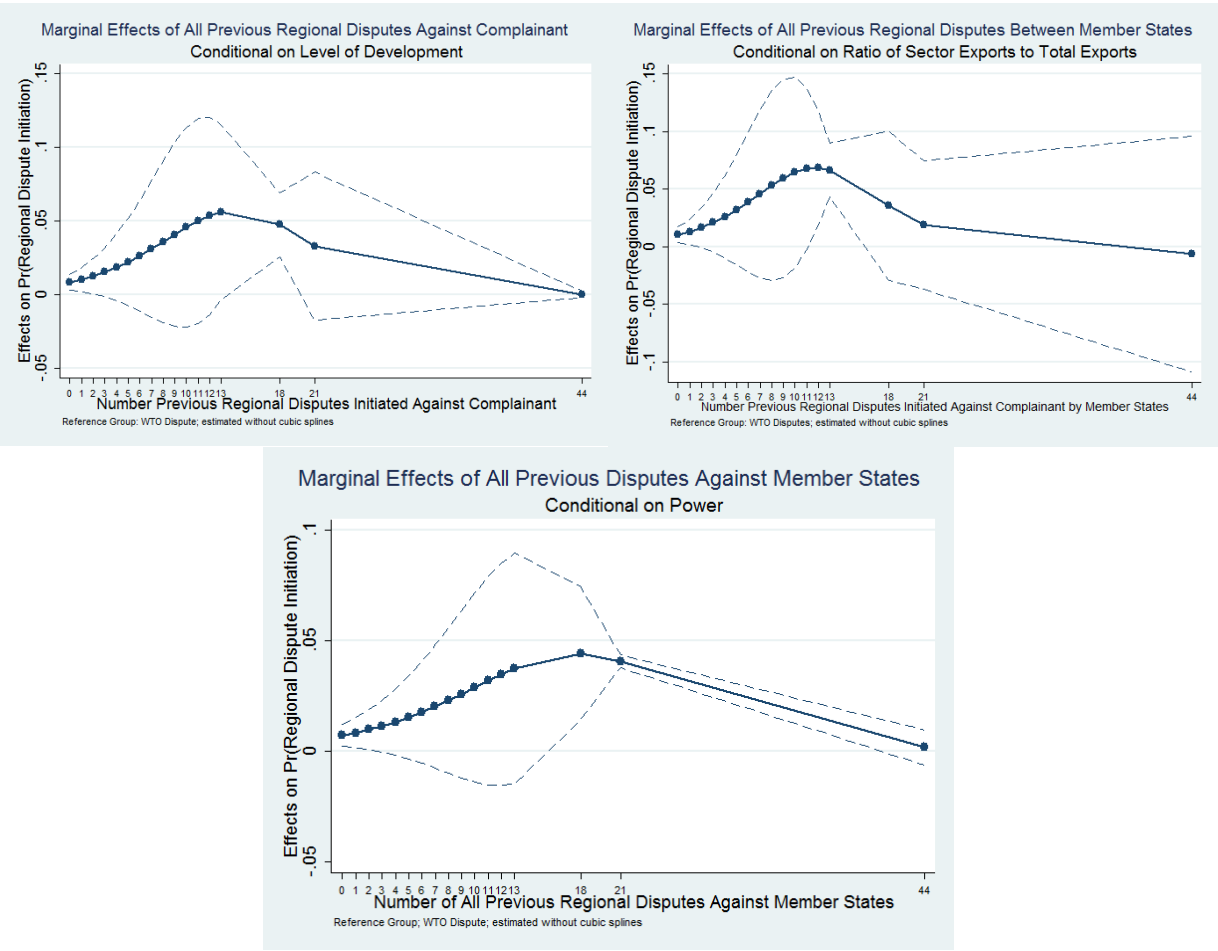


**Figure B.1.4: All Previous Regional Disputes as Respondent Conditional on Learning Capacity, As Previous Experience Increases**



## B.2 CHAPTER 5 SUPPLEMENTAL FIGURES

**Figure B.2.1: Conditional Marginal Effects of Number of Decisions Issued in Previous Five Years, Same Subject Area**

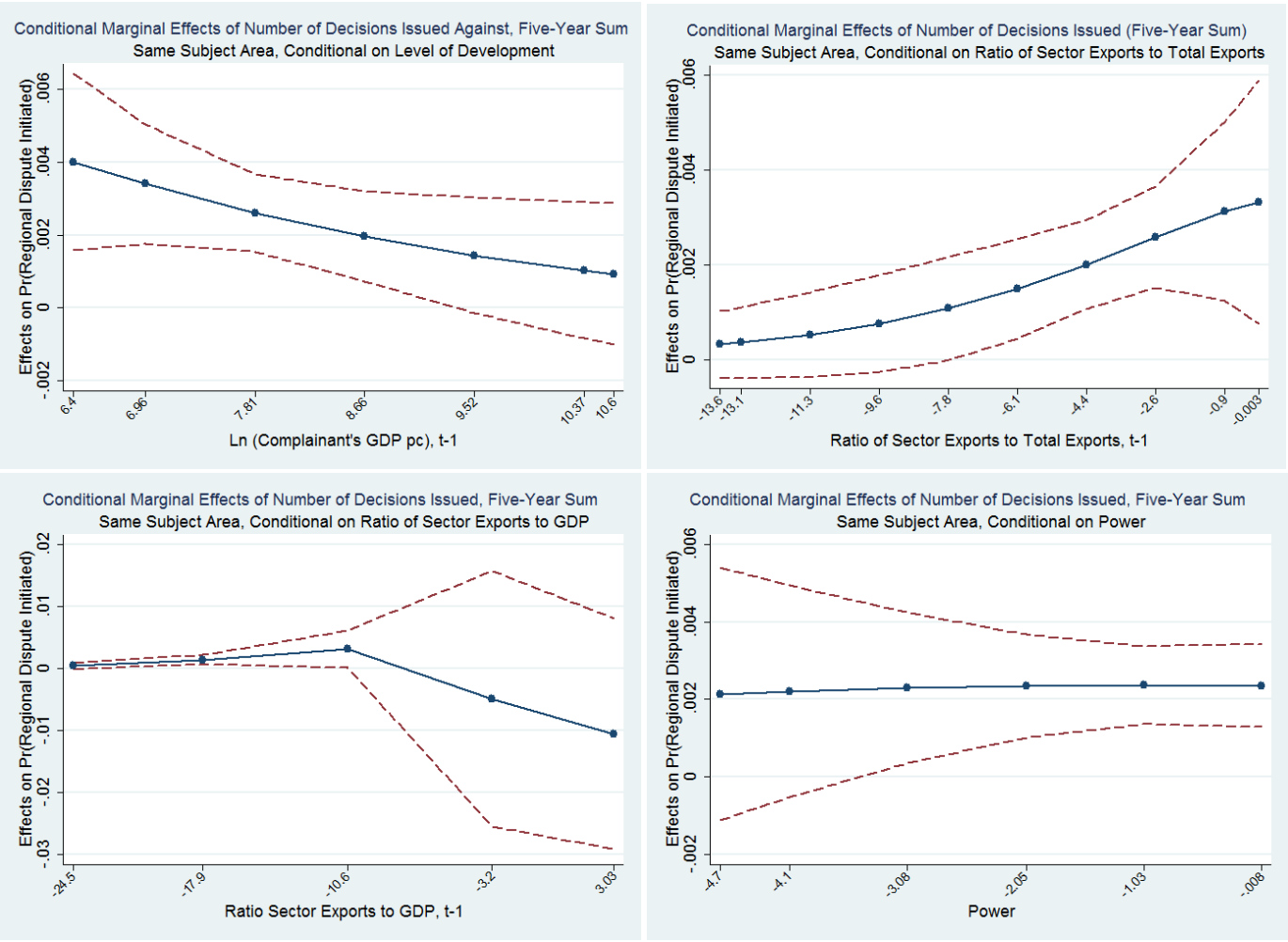
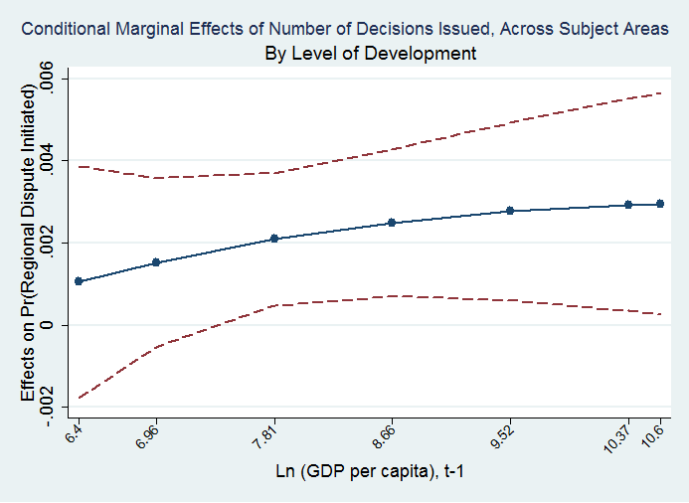
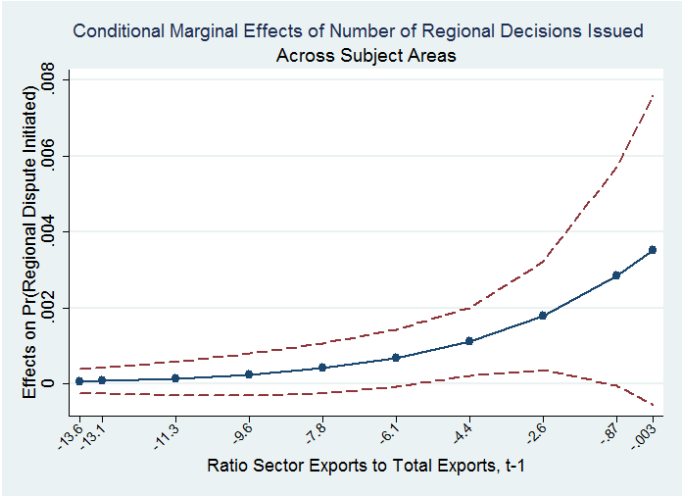
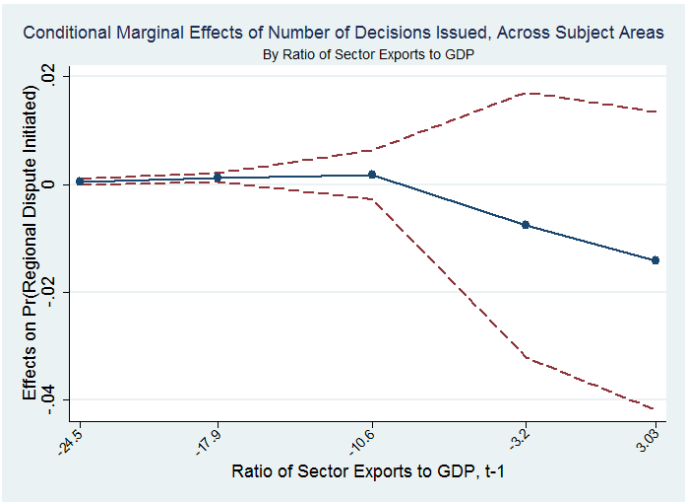


**Figure B.2.2: Conditional Marginal Effects of Number of Decisions Issued, Across Subject Areas**



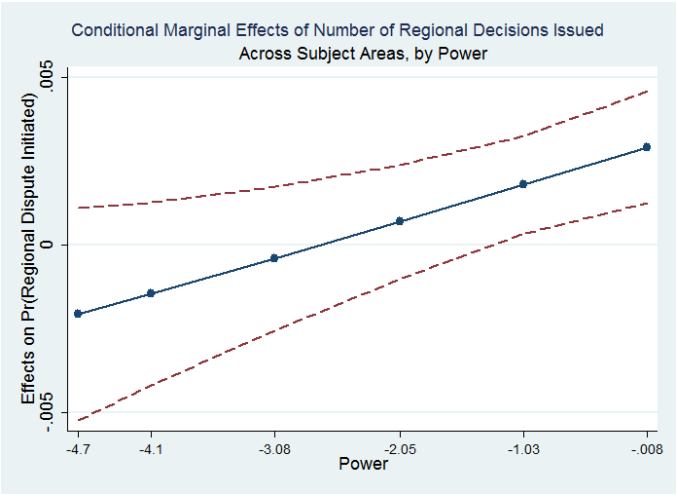
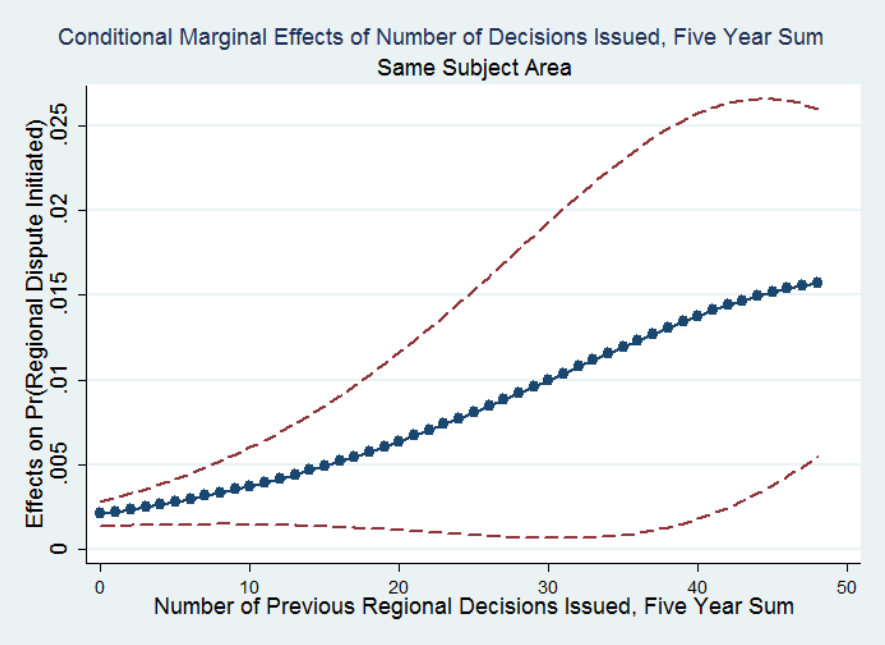



**Figure B.2.3: Conditional Marginal Effects As Number of Decisions Issued Increases**

*A. Number of Previous Regional Decisions Issued, Five Year Sum*




*B. Number of Previous Regional Decisions Issued, Across Subject Areas*

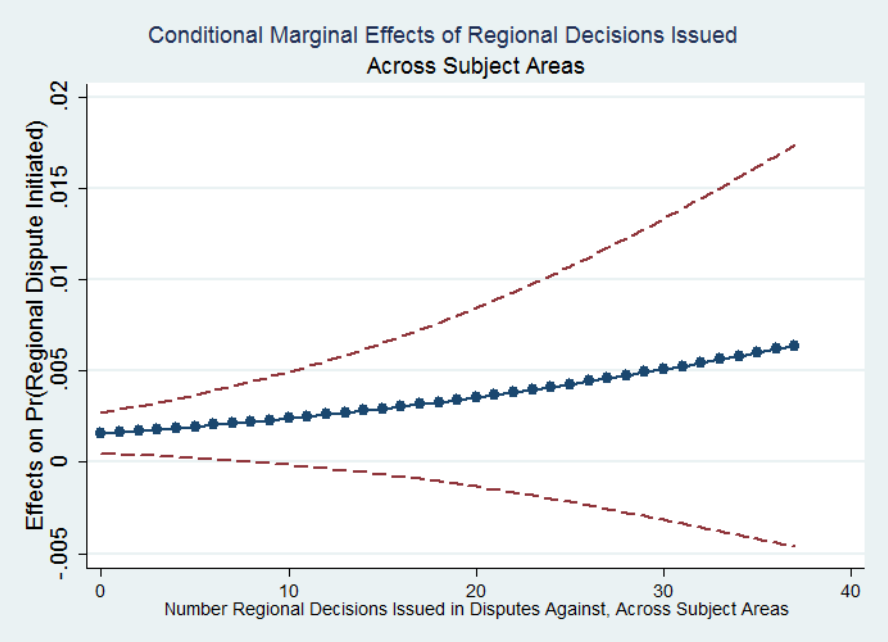


**Figure B.2.4: Conditional Marginal Effects As Number of Decisions Issued Increases, Decisions Conditional on Learning Capacity**

*A. Number of Previous Regional Decisions Issued, Five Year Sum*

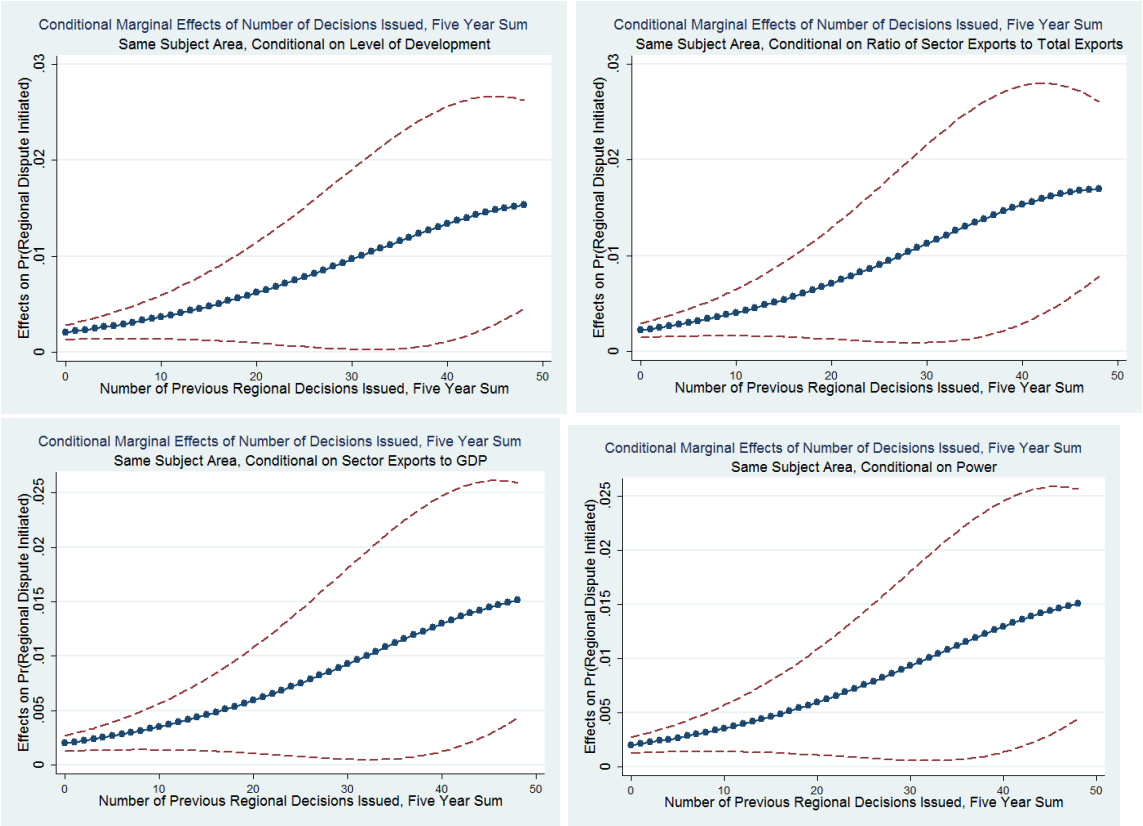


**Figure B.2.4 (Continued): Conditional Marginal Effects As Number of Decisions Issued Increases, Decisions Conditional on Learning Capacity**

*B. Number of Previous Regional Decisions Issued, Across Subject Areas*

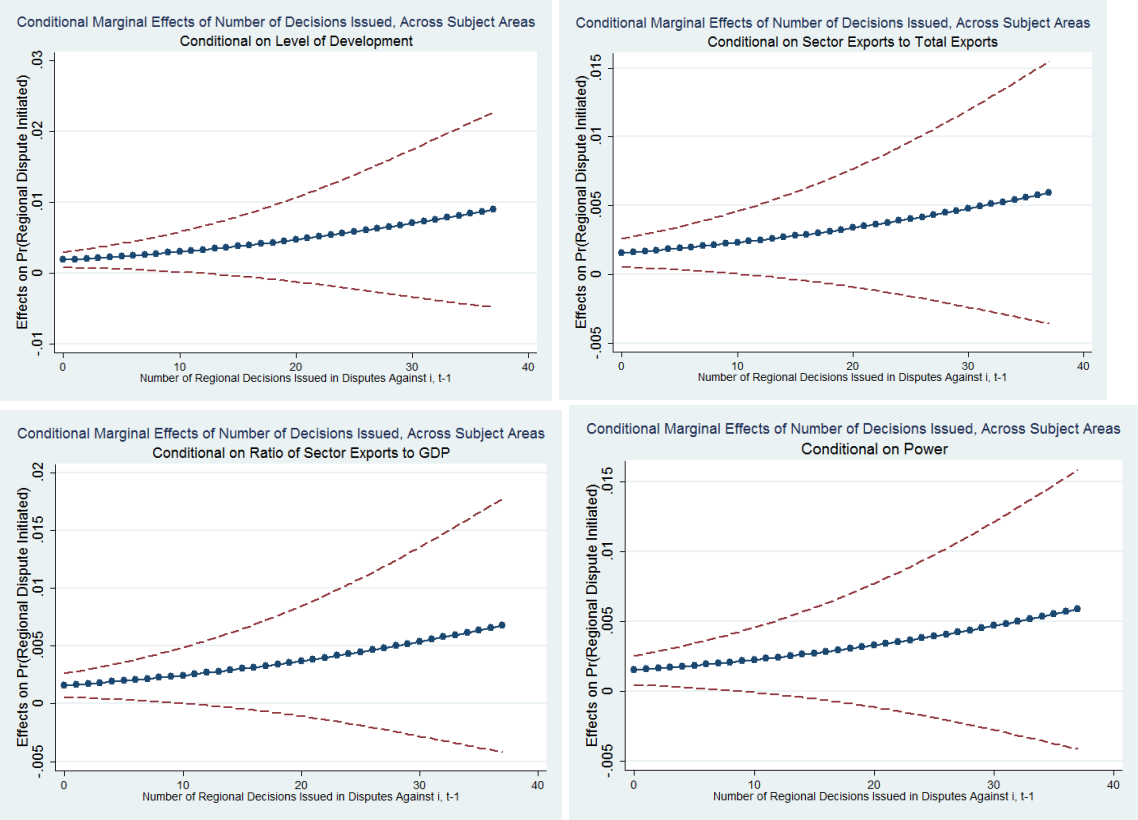
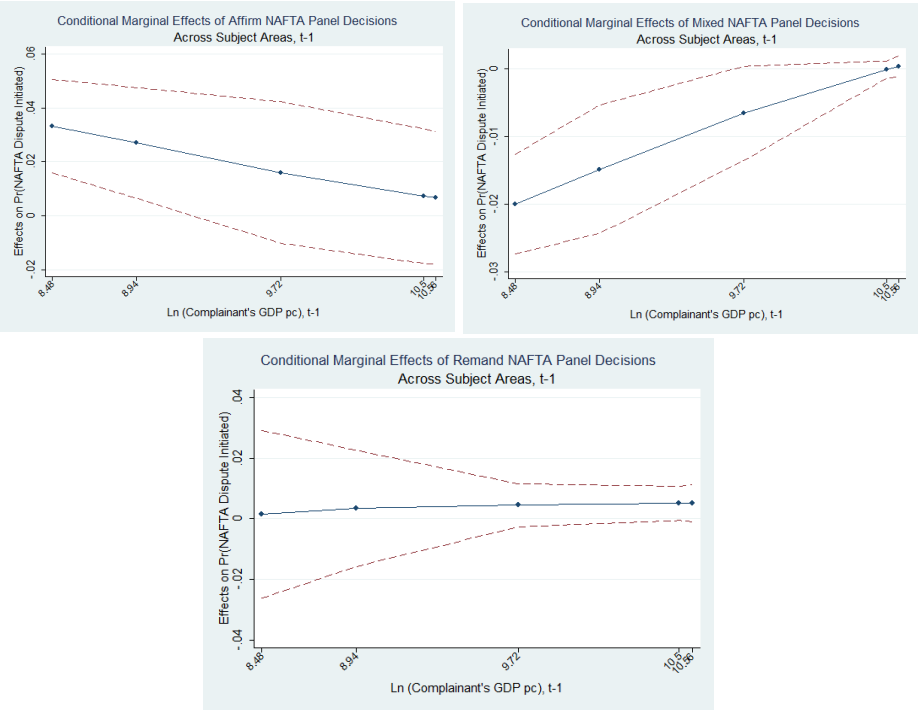
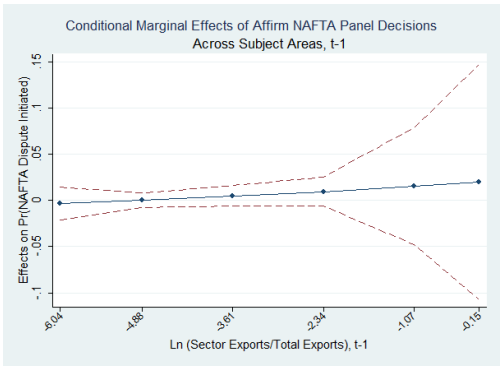


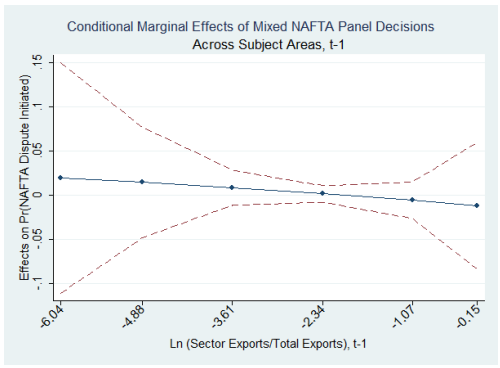
**Figure B.2.5: Conditional Marginal Effect of Number of Different Types of Previous NAFTA Panel Decisions Across Subject Areas, No Dispute Reference Group**

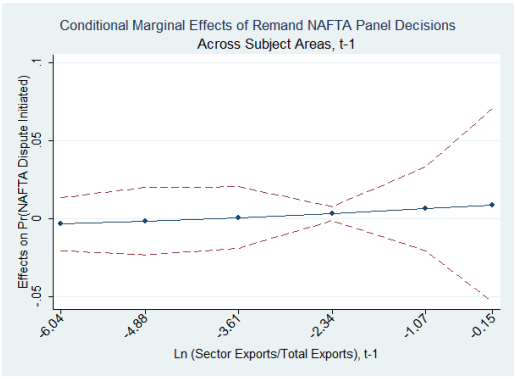
*A. Conditional on Level of Development*



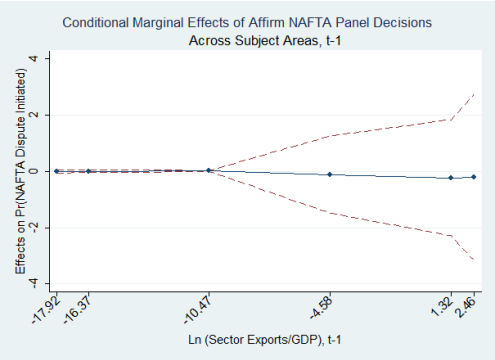
## *B. Conditional on Ratio of Sector to Total Exports*

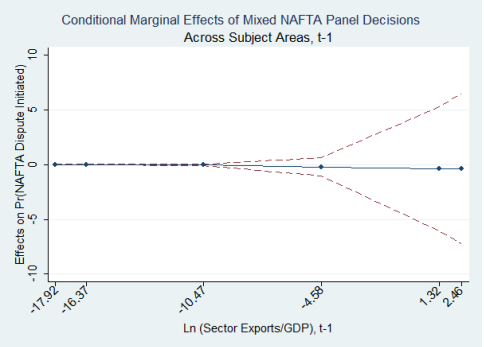


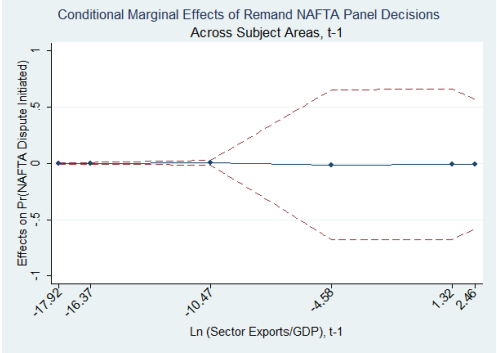



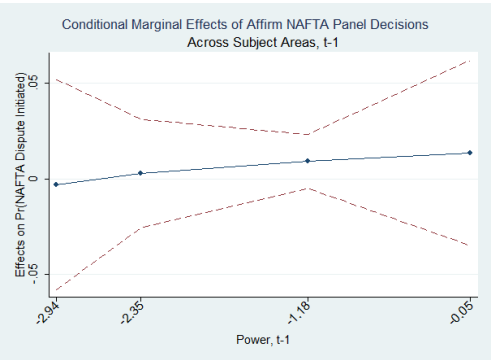

## *C. Conditional on Ratio of Sector to GDP*

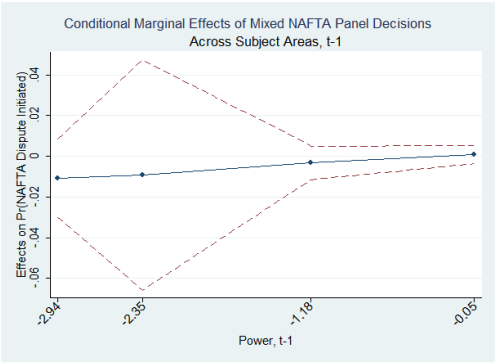


## *D. Conditional on Power*



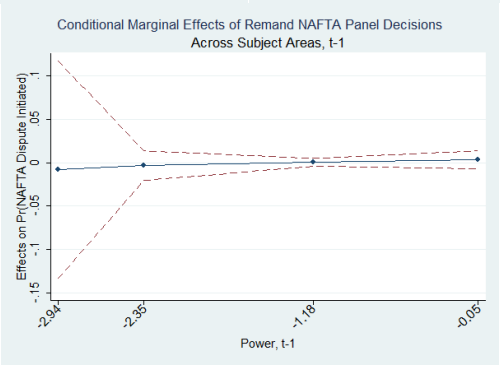
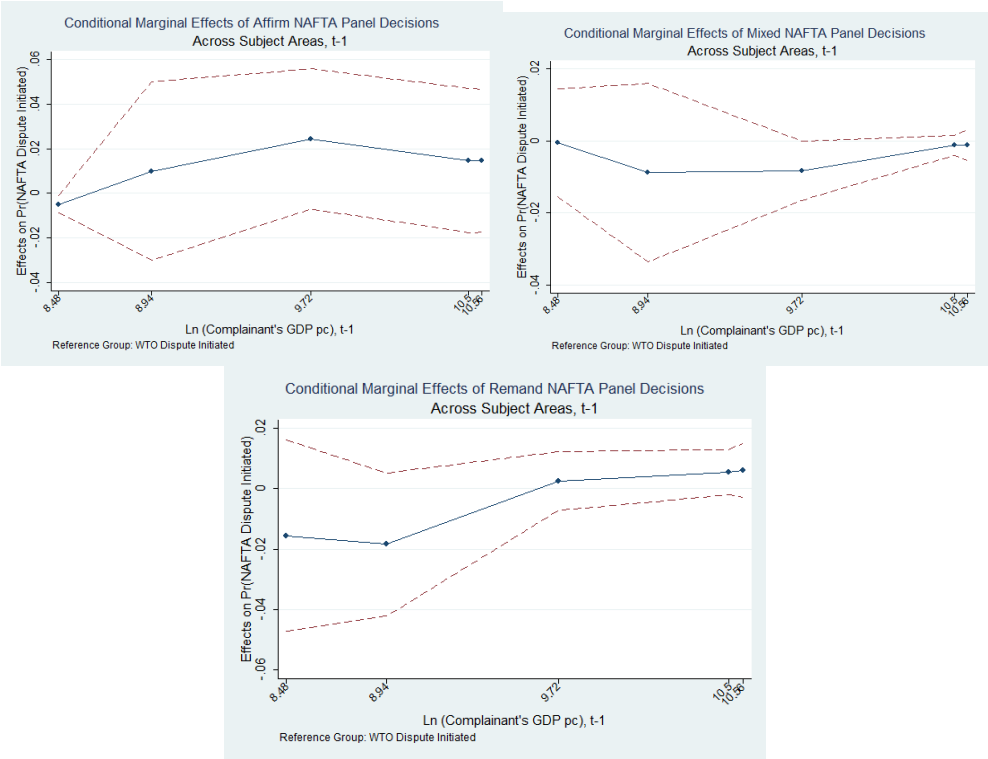
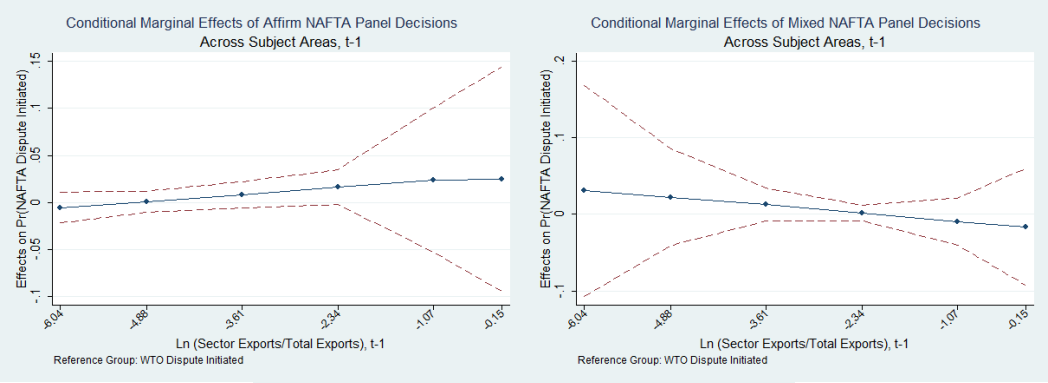



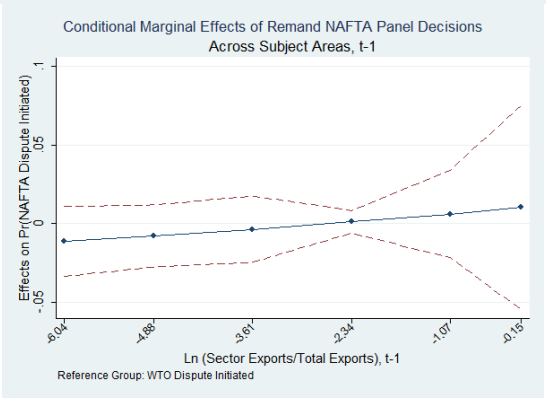
**Figure B.2.6: Conditional Marginal Effect of Number of Different Types of Previous NAFTA Panel Decisions Across Subject Areas, WTO Dispute Reference Group**

*A. Conditional on Level of Development*

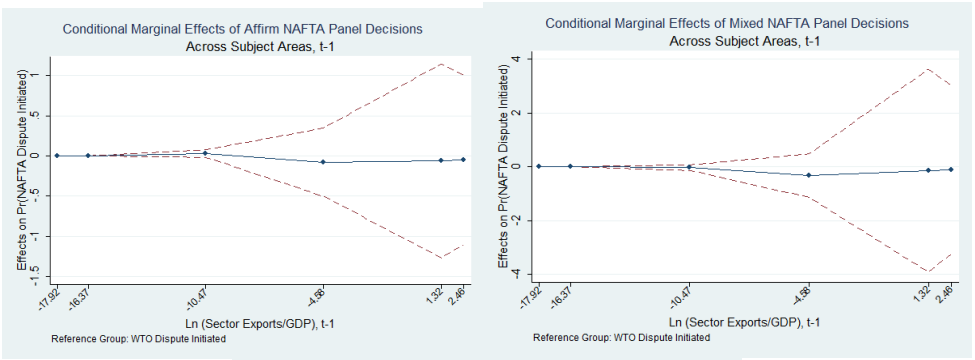


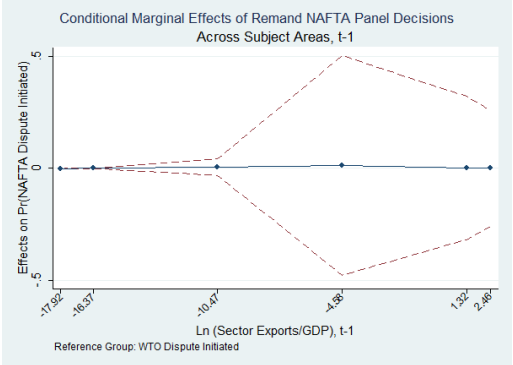
## *B. Conditional on Ratio of Sector Exports to Total Exports*




## *C. Conditional on Ratio of Sector Exports to GDP*



## *D. Conditional on Power*